THE MIND AT WORK

LYMAN

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THE MIND AT WORK

IN

STUDYING, THINKING, AND READING

A SOURCE BOOK AND
DISCUSSION MANUAL

BY

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SCOTT, FORESMAN AND COMPANY

CHICAGO ATLANTA NEW YORK

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ROBERT O. LAW COMPANY
EDITION BOOK MANUFACTURERS
CHICAGO, ILL. U. S. A.

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PREFACE

The primary purpose of THE MIND AT WORK is to furnish in convenient form standard readings on the activities of studying, thinking, and reading, as treated in this book. Upon these subjects much good advice has been given; but it is not easily accessible in printed form for high-school, normal-school, or college classes. Libraries contain many of the selections reprinted in this volume and some of the others named in the bibliographies attached to the various chapters, but in ordinary school work references to them are few and scattering. With this dearth of easily available material in mind, an endeavor has been made to assemble source readings on the subjects named, in content and style suitable for use in the upper years of high school and the lower years of normal school and college. The author has thought of the volume primarily as a source book. He hopes that the selections may give students easy access to valuable information and guidance in the chief activities of school life.

Dr. Charles W. Eliot has said that "the most important step toward getting mental power is the acquisition of a right method in work." Dr. Eliot is no advocate of the theory that students unguided will blunder into good habits of reading, thinking, and studying. Lamenting the fact that courses of study quite generally fail to provide direct instruction concerning various ways of ascertaining and using facts in modern life, he pleads for "innumerable lessons in mental truth-seeking and truth-telling." During the past decade other educators have realized that students should be trained directly in the mental processes that underlie effective thinking and studying. Several volumes upon these and kindred subjects have been addressed to teachers, and at least two excellent elementary how-to-study manuals have been designed for use as textbooks in junior high-school classes. But apparently no textbook treating the activities of studying, thinking, and reading in their proper relations

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has been prepared for more advanced students at the time their maturity warrants a simple analysis of mental processes. In an endeavor to meet this apparent need, THE MIND AT WORK leads pupils to be aware of the mental activities they are using, analyzing with and for them the essential elements of good school work as contrasted with bad. Moreover, the discussions presented here constitute an elementary course in the practical logic needed in everyday life, both in school and out of it.

THE MIND AT WORK is intended to be more than a source book. It is a practice book, organized by chapters which cover the more important mental activities of school and practical life. Each chapter contains an untechnical analysis of certain mental habits which are to be acquired, presents in line with the chapter topic several standard readings of high merit, and provides a variety of topics for investigation, suggestions for further reading, and other problems which furnish practical subject-matter for oral and written composition.

THE MIND AT WORK may profitably be used in any one of four ways: (*1*) It may be substituted for one of the several classics which constitute a year's work in most English classes; (*2*) It may supplement the customary study of essays, orations, and addresses; (*3*) It may be used as a basic textbook in special courses designed to introduce students to effective methods of study; (*4*) It may be taken up once a week throughout a semester as the basis of direct lessons in the mental activities necessary for successful study both within school and without. It is hoped that departments of English and of social sciences especially will find the training here outlined a valuable ally.

The author expresses his indebtedness to Professors S. Chester Parker and William S. Gray of The University of Chicago for helpful suggestions in preparation of the manuscript. He acknowledges also the generous permissions to use copyrighted materials granted by various publishers named throughout the volume.

R. L. LYMAN

Chicago, July 1, 1924

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LABORATORY MATERIALS

FOR USE WITH

THE MIND AT WORK

All of the following books furnish helpful supplementary reading for a class using THE MIND AT WORK as a textbook. It is strongly recommended that the school library, or even better, the class library, be equipped with at least the volumes indicated by asterisks, and that if possible, all the books in the list be made available.

*Adams, John, *Making the Most of One's Mind.* New York, Geo. H. Doran Co.

Sub-title, "A Guide for All Students." This volume contains chapters on various aspects of thinking, reading, and studying suitable for the reading of senior high-school and college students; especially "Nature of Study and Thinking," "Reading," and "Textbooks and Books of Reference."

Baldwin, James, *The Book Lover.* Chicago, A. C. McClurg and Co.

This standard book gathers together from distinguished men of all ages excerpts on books and reading and presents them with running comments by the author.

Boraas, Julius, *Teaching to Think.* New York, The Macmillan Co.

A teachers' book written in simple style containing chapters like "The Development of Skill in Critical Thinking" which are valuable references for students. Suggests many problems and projects supplementary to the similar material of THE MIND AT WORK.

Bryce, James, *Promoting Good Citizenship.* Boston, Houghton Mifflin Co.

Shows the necessity in citizenship for good thinking based upon sound information. A brief and readable book.

Crabb, Arthur, *Samuel Lee, Criminologist.* New York, The Century Co.

A volume of detective stories which show how easy it is for evidence to be wrong.

*Dearborn, G. V. N., *How to Learn Easily.* Boston, Little, Brown and Co.

This volume, helpful as a laboratory book for several chapters in the present volume, presents economical methods of learning.

Dewey, John, *How We Think.* Boston, D. C. Heath and Co.

The authority in the field covered by this manual; it is fitted for a teacher using the present textbook. Portions of *How We Think* are suitable for reading by college and high-school pupils.

Eliot, Charles W., *The Training for an Effective Life.* Boston, Houghton Mifflin Co.

Dr. Eliot's advice to college freshmen and preparatory-school boys about preparation for a successful life.

Fay, Lucy E., and Eaton, Annie T., *The Use of Books and Libraries.* Boston, The Boston Book Co.

One of the best references for specific directions concerning the practical use of books. Each chapter is accompanied by well-selected projects for individual work in comparatively easy research.

*Foster, William T., *Should Students Study?* New York, Harper and Bros.

A small volume from which the article with the same title reprinted in Chapter I of this book is condensed. The entire book, easy and valuable reading, can be read in an hour.

Harrison, Frederic, *The Choice of Books.* New York, The Macmillan Co.

The chapters on "How to Read" and "The Misuse of Books" have valuable suggestions.

*Hawksworth, Hallam, *The Workshop of the Mind.* New York, The Century Co.

An elementary discussion of how we think and act, written in attractive and readable style; especially suited for high-school students.

*Kerfoot, J. B., *How to Read.* Boston, Houghton Mifflin Co.

Written in attractive style. Can be assigned by parts or entire as supplementary reading. Sets forth one of the central theses of the present book—that reading and listening are active, constructive, evaluating processes.

*Kitson, Harry D., *How to Use Your Mind* (Revised Edition). Philadelphia, J. B. Lippincott Co.

An untechnical discussion of the nature of studying and thinking. The chapters are brief; the illustrations are selected from common experiences of life; the style and tone of the book make it suitable and easy reading.

*Larned, J. N., *Books, Culture and Character.* Boston, Houghton Mifflin Co.

Entertaining talks about books. Should be on the library table of every class using the present volume.

Lee, Gerald Stanley, *The Lost Art of Reading.* New York, G. P. Putnam's Sons.

The discussion deals with the more personal, private, grown-up joys and sorrows of the modern reader.

Lockwood, Francis C., *The Freshman and His College.* Boston, D. C. Heath and Co.

Several addresses by college presidents to college boys; a small volume, easy reading, containing good laboratory material for the present course.

Lowe, John Adams, *Books and Libraries,* Boston, Boston Book Co.

A small manual explaining how to investigate a subject in a library.

*Mabie, Hamilton Wright, *Books and Culture.* New York, Dodd, Mead and Company.

An excellent statement of cultural values in reading good literature.

Macy, John, *A Guide to Reading.* New York, The Baker and Taylor Co.

This book for young people of high-school age and beyond has especially good chapters on "Purposes of Reading," "The Reading of Fiction," "The Reading of Poetry," "The Reading of History, of Biography, of Essays," which are helpful supplementary reading for a class in literature.

*McMurry, F. M., *How to Study.* Boston, Houghton Mifflin Co.

McMurry is a pioneer in the field of studying and how to study. His book has been the source of leadership for subsequent writers in this field. Every chapter is suitable for assignment as supplementary reading in the present course; its presence in the classroom is strongly urged.

Penniman, James H., *Books and How to Make the Most of Them.* Syracuse, N. Y., C. W. Bardeen.

A brief book of 100 pages, with eleven compact chapters on various aspects of the use and abuse of books. Chapter V on "The Art of Reading" is especially suggestive.

Powell, Sophia H., *The Children's Library.* New York, The H. W. Wilson Co.

The title does not indicate how suitable the book is for students using THE MIND AT WORK. It has excellent references for investigation, concerning progressive practices in schools; especially in Chapter IV, "The High School Library." The book contains an admirable bibliography on *Reading* in a general sense.

Richardson, Charles F., *The Choice of Books.* New York, G. P. Putnam's Sons.

A valuable and readable volume presenting "The Reading Habit," "The Use of Note-Books," "The Art of Skipping," "What Books to Own," "The True Service of Reading."

Ruskin, John, *Sesame and Lilies.* Chicago, Scott, Foresman and Co.
The first two chapters are the classic articles on reading for culture. Appropriate to the interest and abilities of able students.

*Sandwick, R. L., *How to Study and What to Study.* Boston, D. C. Heath and Co.
This book is addressed primarily to high-school pupils. Part I, especially, "How to Study," in many respects parallels discussions in the early parts of THE MIND AT WORK.

*Schaeffer, N. C., *Thinking and Learning to Think.* Philadelphia, J. B. Lippincott Co.
An exceedingly useful book of reference for classes using the present textbook.

Seward, S. S., Jr., *Note-Taking.* Boston, Allyn and Bacon.
Compact discussion of 80 pages; the best reference for methods of recording the results of reading and listening.

*Shuman, Edwin L., *How to Judge a Book.* Boston, Houghton Mifflin Co.
Presents the tests of literature on the basis of what it accomplishes, rather than what it is; stresses the functional test for literature. Valuable chapters on "The Plot of a Novel," "Character Drawing," "The Short Story." Easy reading; full of concrete references to literature known by senior high-school and college students.

*Smith, C. Alphonso, *What Can Literature Do for Me?* New York, Doubleday, Page & Co.
An excellent book, full of illustrations from literature students usually read in school, pointing out the cultural value of reading.

Smith, Henry Louis, *Your Biggest Job: School or Business.* New York, D. Appleton and Co.
A brief discussion, 80 pages, by the President of Washington and Lee University. A vigorous exposition of the need of preparation. Two strong chapters on study.

Thomas, Frank W., *Training for Effective Study.* Boston, Houghton Mifflin Co.
This is a book for teachers. Chapter VI, "Effective Methods of Study," is suitable for supplementary reading by students.

Whipple, Guy M., *How to Study Effectively.* Bloomington, Illinois, Public School Publishing Co.
A short book of 40 pages, addressed to students. Thirty-eight principles of good workmanship; very clear, simple, and readable. Valuable supplementary book for Chapter I.

Wilson, H. B., *Training Pupils to Study.* Baltimore, Warwick and York.
Eleven factors of efficient study with concrete examples.

CHAPTER ONE

The Nature of Study and of Study Habits

Improving one's effectiveness in study is largely a matter of developing better form in reading, and better habits of listening, observing, thinking, and applying.

SECTION I

THE RELATIONS BETWEEN STUDYING, THINKING, AND READING

A TEXTBOOK OF A DIFFERENT KIND

This book, which considers good habits of using the mind, is different in content and in purpose from most textbooks. A textbook in history, for example, presents a connected discussion of a certain portion of the world's events, suggests supplementary readings, and propounds questions and problems for solution. But very seldom, if ever, does a textbook in history lay upon the student the obligation of thinking about his own methods of work or lead him to analyze the mental activities by which he is carrying on his study. The usual textbook in any subject does not focus the student's attention on himself, on what he is doing and the manner in which he is working; it rightly lays stress upon the facts and relationships of its subject-matter, upon the applications to be made, and upon the problems to be solved.

THE STUDY OF HABITS OF WORK

In contrast, this book endeavors to turn the attention of the worker upon himself, assisting him, as a student, to analyze his

activities in studying, thinking, and reading. Instead of directing attention primarily to the actual facts of a study, THE MIND AT WORK gives direct lessons in habits of study, in various aspects of reflecting, judging, and applying. It constantly requires students to pay careful attention to what they are doing with their minds. It emphasizes the fact that while they are working upon school tasks they are *making their minds*, and that therefore they ought to be definitely aware of what they are doing and why.

Throughout the discussions, the activities of reading, of thinking, and of studying are considered as three aspects of the one process by which we learn to use materials which we find in printed form. All are activities of the mind. We *read* serious books to get ideas; we *think* about them to see what these ideas mean; we *study* ideas and their meanings, endeavoring to make them our permanent possessions and to get ready to use them in problems of our own. Of course there are certain kinds of studying not based on reading. We may plan the substance of a composition without reading at all. Other kinds of school work, like manipulating a machine, have little relation to reading. We often work hard over a problem in mathematics which requires little or no preliminary reading. But we are considering here that portion of our work which requires reading, thinking, and studying at one and the same time.

READING SYMBOLS AND READING MEANINGS

There are two kinds of reading, the first of which may be called the mere recognition of written or printed symbols; and the second, the recognition of the meaning conveyed by such written or printed symbols. The mere act of recognizing printed words is reading in its narrowest sense; it is not a thinking process. Indeed, such recognition is not reading as that activity is to be considered throughout this book. A child first learning to read endeavors to master printed symbols in order that he may instantly recognize them and the ideas for which they

stand. Thus, a child, as he looks at the three words, endeavors to recognize the idea: "The—dog—runs." How hard it is at first! But from the very beginning of reading experience, the three words "The dog runs" are to the child more than words; they represent a story, a very insignificant tale to adults, but not to a six-year-old.

When the reader sees that the words which he recognizes and pronounces tell a story, he begins to read more directly in terms of meanings. Soon the time comes when the mere recognition of words is very largely mechanical; then with little attention necessary for the words themselves, his mind is free to think of the story or the meanings for which the words stand. Ultimately, "knowing how to read" changes completely from the recognition of printed symbols to the recognition and re-creation in the reader's mind of the ideas which the writer recorded upon the page.

We can use a parallel in learning to read music. A pretty painful process it is, that laborious picking out of the proper keys when one first begins! Gradually the difficulty disappears. Finally the musician sits at his instrument and runs his hands lightly over the keyboard, unconsciously performing with rapidity and skill acts which were once painfully slow. He now reads mere notes and phrases without effort and executes them with ease. His mind is free to dwell upon what the composer is saying, what the music means. In other words, the skilled performer's mind goes beyond the symbols, beyond the mechanics, into the realm of interpretation. He thinks, feels, lives his music. In a somewhat similar way, a skilled reader goes beyond symbols, and thinks, feels, and lives the meanings of the printed page.

For our purposes, the recognition of a writer's meaning and the reproduction of it in the reader's mind may be called reading in a restricted sense. One reads a photograph in this manner when he recognizes in it a likeness of father or Alice or Abraham Lincoln. He knows the face, and he knows what the

face means. Then, possibly he begins to "read" or interpret the picture in a very different way; he begins to reflect upon it. What do those lines in the forehead mean? How many times has he seen that smile! How well he knows that firm jaw! What memories of the person's affection or service are at beck and call! Possibly as he studies the photograph he reflects about the meaning of that life, and turns the picture this way and that to let the light fall upon it better—all because he wants the photograph to help him think. Similarly, in true reading, a reader passes from the earlier stage of recognizing what a book says to him to the later stage of realizing what a book means for him. He not only recognizes the thoughts of the writer, but also reflects upon them. He may not literally tip the book as he did the photograph; but he figuratively tips a paragraph or a chapter upside down, finds the heart of a portion of it, and dwells upon what it stands for, in addition to recognizing what it says. In short, a skilled reader interprets; he makes the writer's thoughts his thoughts, and he builds upon them new thoughts of his own.

THINKING IS REFLECTION

It appears, then, that reading and studying are closely related. And thinking is related to both when the student begins to reflect upon what he reads. "Learning what the book says," without thinking, is one form of studying; thus we sometimes study a rule in grammar, a declension in Latin, a formula in algebra, learning by heart something the full meaning of which we have not yet grasped. Fortunately, such experiences of mere memory work are rare. We know today that a good student considers earnestly the meaning and significance of what he is studying before he tries to remember it. The more clearly we understand, the more easily we remember.

And usually "studying" a book means more than an endeavor to remember. It means striving to understand; it means finding the essence of a paragraph or of a series of paragraphs, considering their meaning, estimating their worth, tying up that meaning

with something that is already in our own experience, planning how we can put that meaning to work in problems of our own. While we are studying, we know that certain questions will certainly arise: That is what the writer says, but what of it? What does it signify? Why is it true? Can support be found for it? Where is its weakness? Who made use of it? Here is a problem that involves the principle; solve it! And in anticipating such problems, in trying to answer them as we sit before our books, we are thinking.

The relation between studying, reading, and thinking may be represented by this diagram:

STUDYING
- (1) READING—Recognizing meanings: grasping the thought presented in printed symbols.
- (2) THINKING—Interpreting meanings: reflecting upon the significance of the thought in the light of one's own experience.
- (3) UTILIZING—Making use of meanings: applying the thought to solve some problems of one's own.

For example, if the reader of this discussion is earnestly studying at the present moment, he is trying to recognize the thought presented here; he is considering the significance of the thought by comparing the proposed work with his other school activities, and he is, at the moment he reads these very words, utilizing the thought in getting ready to use this book. Based on his reading, his mental activity, as he reflects, is "thinking."

Although there are forms of study other than those in which such thinking is involved, this book aims to emphasize the importance of thinking as the intelligent method of learning, contrasted with such methods as mechanical memorization, or the mastery of a mass of uninterpreted facts, which to a student are often quite meaningless, or indistinct in meaning. Various problems inserted throughout the text aim to stimulate interest in the subjects of reading, thinking, and studying to such an extent that the student may gain information through his own inquiries.

In short, THE MIND AT WORK constantly attempts to emphasize the importance of *inquiry* in the learning process when the activities of reading, thinking, and studying are the methods employed in learning.

CLASS ACTIVITIES

Throughout THE MIND AT WORK are many questions, topics, individual problems, and group projects. Choose for your own the problems which seem to you most appropriate for yourself, or work upon assignments made by your instructor. You will find it helpful to record and preserve the products of your own activities in a loose-leaf notebook to be used very much as you use laboratory books in history, science, or mathematics. Label your notebook, "Laboratory Record of the Way My Mind Works."

Fix firmly in your mind the distinction which defines all original work as constructive in contrast with the mere learning and remembering of any kind of information. Sometimes, indeed, it is our main business to study details: we learn declensions and conjugations in foreign languages; we master certain facts and principles of science and mathematics; we gain absolute command over specific facts in history or civics or literature. We make such data a part of our store of information. This type of learning is called *acquiring knowledge.* We must never forget that abundant and accurate information, the basis of all sound thinking, is probably the chief objective of all work in school.

At other times we are called upon to make use of the information we have in stock. We are required to apply in a new situation materials which we have learned and perhaps may have previously used in a different way. Such work is a real test of intelligence, because it involves the constructive activity of the mind, as contrasted with the mere learning or acquiring activity. In the latter, memory is chiefly called into play; in the former, reasoning predominates. A stenographer performs his tasks by formula; the records he takes in shorthand, and the transcribing of those records into typewritten form are activities which he performs more or less without thought. In short, the stenographer's expertness depends largely upon memory and upon

manual dexterity. On the contrary, the merchant who dictates important business letters needs to be skillful in fields which defy the use of formulas. Each purchase, or sale, or adjustment is an emergency presenting its own peculiar difficulties; a merchant's expertness depends upon his mental alertness in meeting problems which cannot be solved by rule of thumb. With this distinction in mind, someone has defined education as "growth in the power of successful behavior in view of differing emergencies."

Investigations, Problems, and Projects

1. At the beginning of your work in this course, write out a statement of from three to five of your habits of study; show them to your instructor; keep them secret from others if you prefer. Consider such issues as these: Do you work regularly, at definite periods? Have you a study schedule? Do you waste time getting started? Do you work intensively? Do you permit distractions? Do you seek a quiet room? Is your study primarily an attempt to remember? Do you talk aloud to yourself about important points? Do you write out the essentials of your lessons? Let this be a critical self-examination.

2. Take the first opportunity to observe carefully—without letting him know—one of the honor students of your school while he is studying. You can notice at least a few of his habits. Make notes of your observations.

3. Interview a lawyer or a clergyman about his reading, asking him if he reads differently at different times. Write your interview as if reporting for a student paper.

4. "Getting at the heart of the matter." Recall an instance in which you have avoided side issues, passing by unimportant matters to reach at once the very heart of a question or problem.

5. Report an experience orally in class, using one of these or a similar topic:

(*a*) When I wasted time on the outskirts of a job.
(*b*) Agonizing over getting started; only fifteen minutes left for work.
(*c*) A definite purpose I recently had in one of my studies.
(*d*) An experience I had in "a hit-or-miss method of investigation."

6. Various types of reading may be approached with differing purposes. Examine the four types of reading situations below, as named by F. M. McMurry, and add four examples of your own of problems which call for reading or studying with differing purposes.

(*a*) Examining the catalogues of several colleges to determine which to attend.

(*b*) Studying the English sparrow to find whether it is useful or harmful.

(*c*) Examining Lincoln's "Gettysburg Speech," making ready to convince others of its excellence.

(*d*) Reading a newspaper with the purpose of telling news to a friend.

Add four examples of reading problems approached with differing purposes.

(*e*) .....

(*f*) .....

(*g*) .....

(*h*) .....

7. Recount an experience in which you began to read an article because it was an assigned task; before you had finished, you forgot the requirement because you found a purpose for the reading other than "getting a lesson."

8. Informal debate: Can "studying to get high marks" in any legitimate sense be considered a worthy purpose in school work? If not, what do you propose as a substitute for marks?

9. It is easy to name some books that are "just to be read"; others that "you want to think about"; others that "require study." Try naming such books from your recent school or home reading.

10. Discussion: Answer the questions below, "yes" or "no," and explain your affirmative or negative.

(*a*) Can one read without thinking?

(*b*) Read and think without studying?

(*c*) Can one study without thinking?

(*d*) Study without reading?

(*e*) Think without reading?

(*f*) Can one really apply himself to a book in the truest sense without reading, studying, and thinking?

SECTION II

THE NATURE OF STUDY AND ITS PRINCIPAL FACTORS[1]

F. M. McMurry

Reading Suggestions

The diagram on page 17 shows that studying, when the term is applied to the use of books, is a joint process of reading, thinking, and utilizing. It is fitting that the first selection which you are asked to read should present the chief characteristics of good habits of study. The following article lays the foundation for many of the important principles which are discussed in greater detail in succeeding chapters of this book.

Read the entire article slowly and thoughtfully, trying to find answers to these questions:

(1) What seven leading factors of efficient study are named and discussed by McMurry?

(2) What is the chief difference between mere guesswork and real thinking in solving a problem?

(3) What occasions and conditions in your own daily life call for careful thinking and earnest study?

HOW THE DEMAND FOR STUDY ARISES

Our physical movements ordinarily take place in response to a need of some sort. For instance, a person wishing to reach a certain point, to play a certain game, or to lay the foundations for a house, makes such movements as are necessary to accomplish the purpose desired. Even mere physical exercise grows out of a more or less specific feeling of need.

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[1]From F. M. McMurry's *How to Study*, Chapter II. Reprinted by special permission of, and by special arrangements with, Houghton Mifflin Company, the authorized publishers.

The mental activity called study is likewise called forth in response to specific needs. The Eskimo, for example, compelled to find shelter and having only blocks of ice with which to build, ingeniously contrives an ice hut. For the sake of obtaining raw materials he studies the habits of the few wild animals about him, and out of these materials he manages by much invention to secure food, clothing, and implements.

We ourselves, having a vastly greater variety of materials at hand, and also vastly more ideas and ideals, are much more dependent upon thinking and study. But, as in the case of the Eskimo, this thinking and study arise out of actual conditions, and from specific wants. It may be that we must contrive ways of earning more money; or that the arguments for protective tariff seem too inconsistent for comfort; or that the reports about some of our friends alarm us. The occasions that call forth thought are infinite in number and kind. But the essential fact is that study does not normally take place except under the stimulus or spur of particular conditions, and of conditions, too, that are unsatisfactory.

It does not take place even then unless we become conscious of the strained situation, of the want of harmony between what is and what might be. For ages malarial fever was accepted as a visitation by Divine Providence, or as a natural inconvenience, like bad weather. People were not disturbed by lack of harmony between what actually was and what might be, because they did not conceive the possibility of preventing the disease. Accordingly they took it as a matter of course, and made no study of its cause. Very recently, on the other hand, people became conscious of the possibility of exterminating malaria. The imagined state [freedom from malaria] has made the real state more and more intolerable; and, as this feeling of dissatisfaction has grown more acute, study of the cause of the disease has grown more intense, until it has finally been discovered. Thus a lively consciousness of the unsatisfactoriness of a situa-

tion is the necessary prerequisite to its investigation; it furnishes the motive for it.

THE VARIETY OF RESPONSE TO THE DEMAND FOR STUDY

After we have become acutely conscious of a misfit somewhere in our experience, the actual study done to right it varies indefinitely with the individual. The savage follows a hit-and-miss method of investigation, and really makes his advances by happy guesses rather than by close application. Charles Lamb's "Dissertation on Roast Pig"[1] furnishes a typical example of such accidents.

The average civilized man of the present does only a little better. How seldom, for instance, is the diet prescribed for a dyspeptic the result of any intelligent study! The true scientist, however, goes at his task in a careful and systematic way. Recall, for instance, how the cause of yellow fever has been discovered. For years people had attributed the disease to invisible particles which they called "fomites." These were supposed to be given off by the sick, and spread by means of their clothing and other articles used by them. Investigation caused this theory to be abandoned. Then, since Dr. J. C. Nott of Mobile had suggested, in 1848, that the fever might be carried by the mosquito, and Dr. C. J. Finlay of Havana had declared, in 1881, that a mosquito of a certain kind would carry the fever from one patient to another, this variety of mosquito was assumed by Dr. Walter Reed, in 1900, to be the source of the disease, and was subjected to very close investigation by him. Several men voluntarily received its bite and contracted the fever. Soon, enough cases were collected to establish the probable correctness of the assumption. The remedy suggested—the utter destruction of this particular kind of mosquito, including its eggs and larvæ

[1] A satire showing the roundabout way in which primitive men learn and apply new truth. By the accident of a burning house the Chinese are supposed to have discovered the delicacy of roast pork; thereafter they burned their houses, with the pigs in them, in order to feast upon roast pork.

—was so efficacious in combating the disease in Havana in 1901, and in New Orleans in 1905, that the theory is now considered established. Thus systematic study has relieved us of one of the most dreaded diseases to which mankind has been subject.

THE PRINCIPAL FACTORS IN STUDY

An extensive study, like the investigation into the cause of yellow fever, contains the essential factors common to the investigation of other topics, or to study in general; for different subjects cannot vary greatly when it comes to the general method of their attack. An analysis, therefore, which reveals the principal factors in this study is likely to bring to light the main factors of study in general.

(1) The finding of specific purposes as one factor in study

If the search for the cause of yellow fever were traced more fully, one striking feature discovered would be the fact that the investigation was never aimless. The need of unraveling the mystery was often very pressing, for we have had three great epidemics of yellow fever in our own country since 1790, and scientists have been eager to apply themselves to the problem. Yet a specific purpose, in the form of a definite hypothesis[1] of some sort, was felt to be necessary before the study could proceed intelligently.

Thus, during the epidemic of 1793, the contagiousness of the disease was debated. Then the theory of "fomites" arose, and underwent investigation. Finally, the spread of the disease through the mosquito was proposed for the solution. And while books of reference were examined and new observations were collected in great number, such work was not undertaken by the investigators primarily for the sake of increasing their general knowledge, but with reference to the particular issue at hand.

[1] *Hypothesis:* a proposition that is assumed or taken for granted; a theory set up for further investigation.

The important question now is: Is this, in general, the way in which the ordinary student should work? Of course, he is much less mature than the scientist, and the results that he achieves may have no social value, in comparison. Yet, should his method be the same? At least, should his study likewise be under the guidance of specific purposes, so that these would direct and limit his reading, observation, and independent thinking? Or would that be too narrow, indeed, exactly the wrong way? And, instead of limiting himself to a collection of such facts as help to answer the few problems that he might be able to set up, should he be unmindful of particular problems? Should he rather be a collector of facts at large, endeavoring to develop an interest in whatever is true, simply because it is true? Here are two quite different methods of study suggested. Probably the latter is by far the more common one among immature students. Yet the former is the one that, in the main, will be advocated in this book as a factor of serious study.

(2) The supplementing of thought as a second factor in study

Dr. Reed in this case went far beyond the discoveries of previous investigators. Not only did he conceive new tests for old hypotheses, but he posited[1] new hypotheses, as well as collected the data that would prove or disprove them. Thus, while he no doubt made much use of previous facts, he went far beyond that and succeeded in enlarging the confines of knowledge. That is a task that can be accomplished only by the most mature and gifted of men.

The ordinary scholar must also be a collector of facts. But he must be content to be a receiver rather than a contributor of knowledge; that is, he must occupy himself mainly with the ideas of other persons, as presented in books or lectures or conversation. Even when he takes up the study of nature, or any other field, at first hand, he is generally under the guidance of a teacher or some text.

[1]*Posited:* made, or set up.

Now, how much, if anything, must he add to what is directly presented to him by others? To what extent must he be a producer in that sense? Are authors, at the best, capable only of suggesting their thought, leaving much that is incomplete and even hidden from view? And must the student do much supplementing, even much *digging*, or severe thinking of his own, in order to get at their meaning? Or do authors—at least the greatest of them—say most, or all, that they wish, and make their meaning plain? And is it, accordingly, the duty of the student merely to *follow* their presentation without enlarging upon it greatly?

The view will hereafter be maintained that any good author leaves much of such work for the student to do. Any poor author certainly leaves much more.

(3) The organization of facts collected as a third factor in study

The scientist would easily lose his way among the many facts that he gathers for examination, did he not carefully select and bring them into order. He arranges them in groups according to their relations, recognizing a few as having supreme importance, subordinating many others to these, and casting aside many more because of their insignificance. This all constitutes a large part of his study.

What duty has the less mature student in regard to organization? Should the statements that he receives be put into order by him? Are some to be selected as vital, others to be grouped under these, and still others to be slighted or even entirely omitted from consideration, because of their insignificance? And is he to determine all this for himself, remembering that thorough study requires the neglect of some things as well as the emphasis of others? Or do all facts have much the same value, so that they should receive about equal attention, as is the case with the multiplication table? And, instead of being grouped according to relations and relative values, should they be studied, one at a time, in the order in which they are presented, with the idea

that a topic is mastered when each single statement upon it is understood? Or, if not this, has the reliable author at least already attended to this whole matter, making the various relations of facts to one another and their relative values so clear that the student has little work to do but to follow the printed statement? Is it even highly unsafe for the latter to assume the responsibility of judging relative values? And would the neglect or skipping of many supposedly little things be more likely to result in careless, slipshod work than in thoroughness?

(4) The judging of the worth of statements as a fourth factor in study

The scientist in charge of the above-mentioned investigation was, no doubt, a modest man. Yet he saw fit to question the old assumption that yellow fever was spread by invisible particles called "fomites." Indeed, he had the boldness to disprove it. Then he disproved, also, the assumption that the fever was contagious by contact. After that he set out to test a hypothesis of his own. His attitude toward the results of former investigations was thus skeptically critical. Every proposition was to be questioned, and the evidence of facts, rather than personal authority or the authority of time, was the sole final test of validity.

What should be the attitude of the young student toward the authorities that he studies? Certainly authors are, as a rule, more mature and far better informed upon the subjects they discuss than he; otherwise he would not be pursuing them. Are they still so prone to error that he should be critical toward them? At any rate, should he set himself up as their judge, at times condemning some of their statements outright, or accepting them only in part—and thus maintain independent views? Or would that be the height of presumption on his part? While it is true that all authors are liable to error, are they much less liable to it in their chosen fields than he, and can he more safely trust them than himself? And should he, therefore, being a learner, adopt a docile, passive attitude, and accept whatever statements

are presented? Or finally, is neither of these attitudes correct? Instead of either condemning or accepting authors, is it his duty merely to understand and remember what they say?

(5) Memorizing as a fifth factor in study

The scientist is greatly dependent upon his memory. So is everyone else, including the young student. What suggestions, if any, can be made about the retaining of facts?

In particular, how prominent in study should be the effort to memorize? Should memorizing constitute the main part of study—as it so often does—or only a minor part? It is often contrasted with thinking. Is such a contrast justified? If so, should the effort to memorize usually precede the thinking—as is often the order in learning poetry and Bible verses—or should it follow the thinking? And why? Can one greatly strengthen the memory by special exercises for that purpose? Finally, since there are some astonishingly poor ways of memorizing, there must be some better ways. What, then, are the best, and why?

(6) The using of ideas as a sixth factor in study

Does all knowledge, like this of the scientist, require contact with the world as its end-point, or goal? And is it the duty of the student to pursue any topic, whether it be a principle of physics, or a moral idea, or a simple story, until it proves of benefit to someone? In that case, enough repetition might be necessary to approximate habits—habits of mind and habits of action—for the skill necessary for the successful use of some knowledge cannot otherwise be attained. How, then, can habits become best established? Or is knowledge something apart from the active world, ending rather in self? Would it be narrowly foolish to expect that one's learning shall necessarily work out in practical life? And should the student rather rest content to acquire knowledge for its own sake, not bothering—for

the present, at any rate—about actually bringing it to account in any way?

The use to which his ideas had to be put gave Dr. Reed an excellent test of their reliability. No doubt he passed through many stages of doubt as he investigated one theory after another. And he could not feel reasonably sure that he was right and had mastered his problem until his final hypothesis had been shown to hold good under varying actual conditions.

What test has the ordinary student for knowing when he knows a thing well enough to leave it? He may set up specific purposes to be accomplished, as has been suggested. Yet even these may be only ideas; what means has he for knowing when they have been attained? It is a long distance from the first approach to an important thought to its final mastery, and nothing is easier than to stop too soon. If there are any waymarks along the road, indicating the different stages reached—particularly, if there is a recognizable end-point assuring mastery, one might avoid many dangerous headers by knowing the fact. Or is that particularly what recitations and marks are for? And instead of expecting an independent way of determining when he has mastered a subject, should the student simply rely upon his teacher to acquaint him with that fact?

(7) The tentative attitude as a seventh factor in study

Investigators of the source of yellow fever before Dr. Reed reached conclusions as well as he, but, in the light of later discovery, they appear hasty and foolish, to the extent that they were insisted upon as correct. A large percentage of the so-called discoveries that are made, even by laboratory experiment, are later disproved. Even in regard to this very valuable work of Dr. Reed and his associates, one may feel too sure. It is quite possible that future study will materially supplement and modify our present knowledge of the subject. The scientist, therefore, may well assume an attitude of doubt toward all the results that he achieves.

Does the same hold for the young student? Is all our knowledge more or less doubtful, so that we should hold ourselves ready to modify our ideas at any time? And, remembering the common tendency to become unprogressive on that account, should the young student, in particular, regard some degree of uncertainty about his facts as the ideal state of mind for him to reach? Or would such uncertainty too easily undermine his self-confidence and render him vacillating in action? And should firmly fixed ideas, rather than those that are somewhat uncertain, be regarded as his goal, so that the extent to which he feels sure of his knowledge may be taken as one measure of his progress? Or can it be that there are two kinds of knowledge? That some facts are true for all time, and can be learned as absolutely true; and that others are only probabilities and must be treated as such? In that case, which is of the former kind, and which is of the latter?

SOME LIMITATIONS OF THE TERM STUDY

Study, in general, is the work that is necessary in the assimilation of ideas. Much of this work consists in thinking. But study is not synonymous with thinking, for it also includes other activities, as mechanical drill, for example. Such drill is often necessary in the mastery of thought.

Not just any thinking and any drill, however, may be counted as study. At least only such thinking and such drill are here included within the term as are integral parts of the mental work that is necessary in the accomplishment of valuable purposes. Thinking that is done at random, and drills that have no object beyond acquaintance with dead facts, as those upon dates, lists of words, and location of places, for instance, are unworthy of being considered a part of study.

Daydreaming, giving way to reverie and to casual fancy, too, is not to be regarded as study. Not because it is not well to indulge in such activity at times, but because it is not serious enough to be called work. Study is systematic work, and not

play. Reading for recreation, further, is not study. It is certainly very desirable and even necessary, just as play is. It even partakes of many of the characteristics of true study, and reaps many of its benefits. No doubt, too, the extensive reading that children and youths now do might well partake more fully of the nature of study. It would result in more good and less harm; for, beyond a doubt, much careless reading is injurious to habits of serious study. Yet it would be intolerable to attempt to convert pleasure-reading fully into real study. That would mean that we had become too serious.

On the whole, then, the term study as here used has largely the meaning that is given to it in ordinary speech. Yet it is not entirely the same; the term signifies a purposive and systematic, and therefore a more limited, kind of work than much that goes under that name.

CLASS ACTIVITIES

Round-table Discussion

1. Use the questions under 10 on page 20 to start a discussion. Let each pupil try to make a contribution. What part of McMurry's article suggested your contribution?

2. Preparation for an informal test. Turn back as often as you please to McMurry's article. Prepare for class discussion by getting ready to explain, with references to his account of the yellow-fever investigations, the meaning of each of these statements and questions:

(*a*) The purposes of study arise out of needs, wants, difficulties, dangers.

(*b*) A good student often supplements the thought of others.

(*c*) Good study recognizes a few facts as "having supreme importance."

(*d*) "Judging the worth of statements" is a fourth factor in study.

(*e*) What questions does McMurry raise about the relation of remembering to study?

(*f*) Constantly attempting to think of applications and uses is the crowning step of study.

(*g*) The truth is always growing; an effective student holds his mind in readiness for new truth.

3. Illustrate the seven points again, this time from your own experiences, reading, conversations, and observations, in one of these fields:

(*a*) Your study of sanitation or of some kindred subject in your science classes.

(*b*) Your study of immigration or of some kindred subject in civics, or community life.

(*c*) Your study of the value of physical training or interschool athletics.

(*d*) Your study of student self-government as a factor in school life.

(*e*) Your study in American history of the founding of our nation.

Individual Problems

Prepare a brief oral or written report upon one of the following problems.

1. Why is the study of lessons in school far less fascinating to some students than the study of a gasoline engine, of a wireless apparatus, of violin or piano? Answer this in the light of McMurry's first point (pages 21-22).

2. In order to explain to the class McMurry's reference on page 23, read Lamb's "Essay on Roast Pig." (It is in Greenlaw, Elson, and Keck's *Literature and Life, Book One,* page 17.)

3. Get references on the conquering of yellow fever by Dr. Reed and associates. (See *Uncle Sam's Modern Miracles,* W. A. Du Puy, Chapter XVII, "Yellow Fever.") Read and report to the class. Use an encyclopedia to find the theory of "fomites," one of the earlier hypotheses concerning the cause of yellow fever, mentioned on page 27.

4. "A good author leaves much of the work for the student to do." We shall consider this truth extensively in a later chapter. Can you explain the point now by citing several examples from your own study?

5. "Thorough study requires the neglect of some things." Of course,

this refers to relatively unimportant items or parts of a subject you are studying. Try to illustrate this point from your study in any of your courses. What details can you afford to neglect?

6. "Daydreaming instead of study." Do you ever have the shock of suddenly waking to the realization that you have read several pages, and yet your mind is an utter blank so far as that reading is concerned? Describe such an experience. Which of McMurry's principles did you violate?

7. Many cases in which reflective thinking is employed arise out of the existence of some need, some felt want, some real or supposed injustice or inequality in existing affairs. A statement of this fact is given in McMurry's first paragraphs, in his reference to the Eskimo. With this in mind, carry out these problems:

(*a*) To the list suggested below, add topics in which reflective thinking begins with a clear statement of a felt need; fill in the blank lines with questions and topics of local significance. In each case explain what "need" is the starting point of discussion.

School

(i) Shall we support a school paper?
(ii) Shall we add a new department to the school paper?
(iii) Modifications in the system of monthly reports.
(iv) The value of a course that deals directly with the nature of study habits.
(v) .....

Recreation

(i) Shall our city have public playgrounds?
(ii) Removing all signs "Keep off the grass."
(iii) Should we have compulsory physical training?
(iv) .....
(v) .....

Government

(i) A large vs. a small city council.
(ii) A new fire station in Ward 9?
(iii) .....
(iv) .....
(v) .....

(*b*) Name other problems for thinking which arise out of needs or wants: in the field of city improvement; of good roads in the country; of speed limits for automobiles; of public playgrounds and bathing beaches in the city; of adequate school buildings.

(*c*) What problems involving difference of opinion have arisen in your school during the past year? When you have named two or three, try to trace each back to either the actual or the imagined needs which lie at their roots.

8. Reflective thinking is by no means limited to questions upon which there is actual controversy, although differences in opinion are fruitful in arousing such thinking. Try to name situations in your school life which call for reflection, although they may not have called forth any debate. Name examples for reflective thinking especially in your literature classes, in your history or science classes. Be ready to explain the point in this paragraph in terms of the example you select.

9. McMurry emphasizes the fact that much reflective thinking produces some social value; witness the devoted work of Dr. Reed and his associates. Have you ever enjoyed a play or a book so heartily that you immediately endeavored to persuade your friends to see or to read it? Explain to the class how you proceeded in your persuasion. Suggest other social values which have come from reflective thinking.

10. Be able to name the seven factors of study and to explain the meaning of each.

SECTION III

SHOULD STUDENTS STUDY?[1]

WILLIAM T. FOSTER

Reading Suggestions

The following selection presents abundant evidence showing that good scholarship is a reliable ground for predicting success. The article furnishes excellent laboratory material for practicing several features of efficient study. Plan to carry out, preferably in the classroom, all trying together, the features of efficient study here named. Complete each step in order before you begin the next.

(1) Secure bodily comfort. Sit comfortably erect with the light falling evenly on your page, holding the book at an easy angle and correct distance. Be comfortable, but not too comfortable. A reader settles back in a cushioned rocking-chair when he is reading an interesting story and never thinks of becoming sleepy. But when he has in hand a book that requires earnest study, he must not allow his body to be too comfortable. And yet, for efficient work, the body must not be positively uncomfortable. The principle is that for effective study the body must not make its presence felt at all.

(2) Determine a purpose. Read the title. Think about it. The answer to the question "Should Students Study?" is obvious; but you should be curious to know how the author proves that it pays to study. What would you like to have this article answer for you? If you cannot immediately name a purpose for reading, look slowly through Foster's first three paragraphs; think of your own achievements, your weaknesses, your ambitions. Can you think of a possible use you

[1]Reprinted by permission from William T. Foster's *Should Students Study?* Copyright, Harper and Brothers.

could make of proof that it pays to study? If so, your purpose in reading is at hand.

(3) Secure a bird's-eye view of the entire article. Now glance rapidly through the entire selection to secure a bird's-eye view of Mr. Foster's argument; make use of the various headings in the text to note the leading divisions and subdivisions of his thinking, and their relations to each other. Notice particularly that the first major division deals with scholarship in the high school, the second, with scholarship in college, the third with the professional school, and the last with ultimate success in life.

(4) Select important parts. After your preliminary examination, check back over the article and pick out certain passages which seem to you most significant. Remember where they occur in order that you may consider them more intently during your second reading.

(5) Study selected parts intensively. Reread the entire article slowly, giving special consideration to the passages which contain the most vital data. If possible, relate the substance of these passages to experiences of your own, supporting or contradicting Mr. Foster's argument.

(6) Recall the essentials and repeat them to yourself. Close your book. Ask yourself "Should Students Study?" Recall Mr. Foster's main line of argument and some significant data for each division.

(7) Make a final summary of the meaning. Give without reference to the book, after your final reading:

(*a*) The strongest piece of evidence presented to the effect that high rank in the high school means high rank in college.

(*b*) The strongest evidence that high scholarship in college means achievement in the graduate school.

(*c*) The strongest data that scholarship in school means distinguished success in life.

Complete each of the seven steps of study one at a time. So far as possible finish each before you attempt the next.

Is high scholarship worth the effort? In other words, is there any evidence that a student who attains high marks is more likely to achieve success after graduation than a student who is content with passing marks?

I.[1] HIGH-SCHOOL SCHOLARSHIP AND SUCCESS IN COLLEGE

Are good students in high school more likely than others to become good students in college?

(1)[1] Professor Walter F. Dearborn tried to answer that question for the State of Wisconsin. He compared the records of hundreds of students at the University of Wisconsin with their records in various high schools. He found that above 80 per cent of those who were in the first quarter of their high-school classes remained in the upper half of their classes throughout the four years of their university course, and that above 80 per cent of those who were in the lowest quarter of their high-school classes failed to rise above the line of mediocre scholarship in the University. The parallelism is so striking that we are justified in concluding that, except in scattering cases, promise in the high school becomes performance in the college. Indeed, only one student out of nearly five hundred in this investigation who fell among the lowest quarter in the high school attained the highest rank in the University. Of course, a boy may loaf in high school and take his chance of being the one exception among five hundred. But he would hardly be taking a sporting chance; it would be rather a fool's chance. The risk would be less in going over Niagara Falls in a barrel.

(2) The University of Chicago found that high-school students who failed to attain an average rank higher than the passing mark, by at least 25 per cent of the difference between that passing mark and 100, failed in their college classes. The faculty therefore decided not to admit such students. Exceptions were made of the most meritorious cases, but few of these exceptions made satisfactory records in the University.

(3) Basing its policy upon such evidence as this, Reed College, of Portland, Oregon, decided to admit, as a rule, only students who ranked in the first third of their preparatory-school classes.

[1]The numbers, placed in the text by the author's permission, are inserted for the convenience of students in their laboratory work.

Some exceptions were made. Twenty per cent of those admitted were known to be below the first third, and 2 per cent below the median line.[1] In all cases these candidates were regarded as the most promising of those who fell below the first third in high-school rank, yet almost without exception they failed to rise above the lowest quarter of their college classes. Thus, it appears that in Oregon, as in Wisconsin and Illinois, those who get the best start in the lower schools maintain their advantage in the upper schools; few of their classmates overtake them.

II. COLLEGE SCHOLARSHIP AND SUCCESS IN PROFESSIONAL SCHOOLS

But why strive for high rank in college? Why not wait for the more "practical" studies of the professional school? Hundreds of boys the country over declare today that it makes little difference whether they win high grades or merely passable grades in studies that are cultural rather than practical, since these courses have no definite bearing on their intended life-work. Almost invariably they are ready to admit that they must settle down to serious effort in the studies of law, medicine, engineering—that is to say, in professional schools. Even the sport who makes the grade of mediocrity his highest aim as a college undergraduate fully intends to strive for high scholarship in his professional studies. Does he often attain that aim? That is the question.

(1) And that, fortunately, is a question we may answer with more than opinions. We may take, for example, all the students who graduated from Harvard College during a period of twelve years and entered the Harvard Medical School. Of the 239 who received no distinction as undergraduates, 36 per cent graduated with honor from the Medical School. Of the 41 who received degrees of A.B. with high honor, more than 92 per cent took their medical degrees with honor.

(2) Still more conclusive are the records of the graduates of

[1] In the lower half of their high-school classes, in scholarship.

Harvard College who during a period of twenty years entered the Harvard Law School. Of those who graduated from college with no special honor, only 6½ per cent attained distinction in the Law School. Of those who graduated with honor from the college, 22 per cent attained distinction in the Law School; of those graduated with great honor, 40 per cent; and of those who graduated with highest honor, 60 per cent. Sixty per cent! Bear that figure in mind a moment, while we consider the 340 who entered college "with conditions"—that is to say, without having passed all their entrance examinations—and left college with plain degrees. Of these men, not 3 per cent won honor degrees in law.

If a college undergraduate is ready to be honest with himself, he must say, "If I am content with mediocre work in college, it is likely that the men in my class who are graduated with honor will have three times my chances of success in the Law School, and the men in my class with highest honor will have nearly ten times my chances of success." So difficult is it for a student to change his habits of life after the crucial years of college that not one man in twenty years—not one man in twenty years—who was satisfied in Harvard College with grades of "C" and lower gained distinction in the studies of the Harvard Law School.

(3) The same relation appears to persist between the promise of Yale undergraduates and their performance in the Harvard Law School. If we divide the 250 graduates of Yale who received their degrees in law at Cambridge[1] between 1900 and 1915 into nine groups, according to undergraduate scholarship, beginning with those who won the highest "Senior Appointments" at Yale and ending with those who received no graduation honors, we find that the first group did the best work in their studies of law, the second group next, the third group next, and so on, in the same order, with but a single exception, to the bottom of the

[1]*Cambridge*, Massachusetts, is the seat of Harvard University.

list. The performance at Harvard of each of the eight groups of Yale honor graduates was in precise accordance with the promise of their records at Yale.

Apparently the "good fellow" in college, the sport who does not let his studies interfere with his education, but who intends to settle down to hard work later on, and who later on actually does completely change his habits of life, is almost a myth. At least his record does not appear among those of thousands of students whose careers have been investigated under the direction of President Lowell[1] and others. It seems that results are legal tender, but you cannot cash in good intentions.

"Dignified credit to all," cries the billboard. "Enjoy your new suit now, and pay for it later." Many a boy, lured by the installment plan, expects to get an education on deferred payments in effort, only to find that there is no credit for him, dignified or otherwise. What his honest effort has paid for in full is his today; nothing more by any chance whatever.

III. PROFESSIONAL-SCHOOL SCHOLARSHIP AND SUCCESS IN LIFE

Let us pursue the inquiry one step further. Let us ask whether success in studies gives promise of success in life. As far as the study of law is concerned, we may answer at once that the known success of the honor graduates of the Harvard Law School is one reason why even college undergraduates at Cambridge believe that law students should study law—hard and seriously. For the same reason, leading law-offices the country over give preference to honor graduates of law schools.

(1) As one measure of success in life, we may take the judgment of certain men. In so far as we accept their judgment, our findings concerning the relation between college studies and this kind of success will seem important to us. Here, as in most questions of educational aim, we can do no better for the present than take the consensus of opinion of competent judges.

Using this measure for success, I endeavored to find out

[1]President A. Lawrence Lowell of Harvard University.

whether the members of the class of 1894 of Harvard College who had become notable in their lifework had been notable in their studies. I therefore asked three judges to select, independently, the most successful men from that class. I chose as judges the Dean of the college, the secretary of the Alumni Association, and a professor in Columbia University who is a member of the class, because I thought that these men came nearer than any others to knowing all members of the class. I left each judge free to use his own definition of success, but I asked them not to select men whose achievements appeared to be due principally to family wealth or position. The judges agreed in naming twenty-three successful men. I then had the entire undergraduate records of these men accurately copied from the college records and compared with the standing of twenty-three men chosen at random from the same class.

The result was striking. The men who were thus named as most successful attained in their college studies nearly four times as many highest grades as the random selection. To the credit of the successful men are 196 "A's"; to the credit of the other men, only 56.

(2) Following a similar plan, three judges selected the most successful men among the graduates of the first twenty-four (1878-1901) classes from the University of Oregon. An examination of the scholarship records of these men showed that 53 per cent had been good students and 17 per cent had been weak students. Of the graduates who were not regarded as successful, 52 per cent had been weak students and only 12 per cent had been good students.

(3) Similar results have been found by Dean A. A. Potter, of the Kansas State Agricultural College, in an unpublished study of the relationship between superiority in undergraduate scholarship and success in the practice of engineering as indicated by salaries received. The Director of the School of Forestry of Yale University has collected evidence of the same kind in an unpublished study of the graduates of the Yale School

of Forestry. It appears that about 90 per cent of the men who have had conspicuous success in the field of forestry were among the better students in their professional studies. President Thwing of Western Reserve University, the historian of higher education in America, says that he has found no exception, in the records of any American college, to the general rule that those who achieve most before graduation are likely to achieve most after graduation.

(4) The list of the first ten scholars of each of the classes that graduated from Harvard College in the sixth decade of the last century, as presented by William Roscoe Thayer, is a list of men eminent in every walk of life. Indeed, it is likely that the first quarter in scholarship of any school or college class will give to the world as many distinguished men as the other three-quarters.

(5) What can we say in this connection of the 420 living graduates of the ten Wesleyan University classes from 1890 to 1899? Just this: Of the men in that group who graduated with highest honors, 60 per cent are now regarded as distinguished either by *Who's Who in America*[1] or by the judgment of their classmates; of those who were elected to Phi Beta Kappa—the scholarship honor society—30 per cent; of those who won no superior honors in scholarship, only 11 per cent. Of the men now living who graduated from Wesleyan University between 1860 and 1889, 10 per cent are listed in *Who's Who;* of those who received high honors in scholarship during this period, 50 per cent; of those who attained no distinction as scholars, only 10 per cent.

From the records of 1667 graduates of Wesleyan University, Professor Nicholson concludes that of the highest-honor graduates (the two or three leading scholars of each class) one out of two will become distinguished; of Phi Beta Kappa men, one out of three; of the rest, one out of ten.

(6) Further proof of the relation between scholarship and

[1] *Who's Who in America.* Chicago: A. N. Marquis and Co., A Biographical Dictionary of Notable Living Men and Women of the United States.

success in life was found by Professor E. G. Dexter. He compared the records, before and after graduation, of the men of twenty-two colleges. Of all the living graduates of these colleges, he found about 2 per cent in *Who's Who;* of the honor scholars, he found 5.9 per cent. It thus appears that the chances of this kind of success in life of a good student are about three times the chances of students selected at random. Looking at the records in still another way, we may observe that about 15 per cent of all graduates are Phi Beta Kappa men. If rank in college has nothing to do with success in life, we should expect to find that 15 per cent of the graduates in *Who's Who* were Phi Beta Kappa men. But they surpass this expectancy by nearly 100 per cent.

IV. ULTIMATE GOALS

In much that I have said about success I have used the mathematical term "chance," a term as far removed as any term could be from the popular notion of luck. If all these studies prove anything, they prove that there is a long chain of causal connections binding together the achievements of a man's life and explaining the success of a given moment. That is the non-skid chain that keeps him safe in slippery places. Luck is about as likely to strike a man as lightning, and about as likely to do him any good. The best luck a young man can have is the firm conviction that there is no such thing as luck, and that he will gain in life just about what he deserves, and no more. The man who is waiting around for something lucky to turn up has time to see a preparedness parade pass by him—the procession of those who have formed the habit of turning things up. In a bar-room at a prairie station in the West I once saw the sign, "Luck beats science every time." That is the motto of the gambler. But all men who have won durable distinction are proof that science beats luck—science operating through the laws of heredity and habit.

The student who is really eager to excel in any lifework, and

who is brave enough to face the facts, will take down that sign from the walls of his room, "Do not let your studies interfere with your education," and replace it with this one, "Do not let your school life interfere with your life's ambition." The one without ambition will take for his motto, "Let well enough alone," oblivious to the fact that people who are content to let well enough alone rarely do well enough.

CLASS ACTIVITIES

Problems and Topics for Investigation

From among these or other lines of inquiry suggested by them, choose topics for written or oral discussion as the teacher directs, or as directed by a committee of the class appointed for the purpose.

1. Can you, without turning back, give the essence of the three lines of evidence cited by Foster to prove that excellent scholarship in the high school means excellent scholarship in college? Write from memory.

2. Difference of opinion may have arisen among you as to which is the strongest of the various items of evidence advanced by Foster. Perhaps you can work out through class discussion some tests for strong evidence of this order. List them on the blackboard.

3. Find and quote the data from Foster's article which best support the following statement of Charles W. Eliot, President of Harvard from 1869 to 1909. He once spoke to the freshman class of the mark "C" as follows:

> We have five grades in Harvard College—A, B, C, D, and E. Do you see the bearing of the statement: "The gentleman's mark is 'C' "? He is not to be an effective, strong worker. He is not to be a man with a strong grip and a high purpose. He is not to be a strenuous seeker after efficiency and power. He is to be an indifferent, good-for-nothing, luxurious person, idling through the precious years of college life. Can there be a stupider or a falser idea of a gentleman than that?

4. Plan a debate on the subject "Do grades in scholarship represent fairly the comparative merits of high-school students?"

5. Cite some examples from Foster in support of the statement that the central thoughts of an article are made to stand out vividly if the supporting details are numerous and cumulative.

6. Apply this idea to Foster's article: The field of thought is like an irregular surface, with heights or peaks scattered over it. As mountains rest upon the lower lands about them, the larger ideas are supported by the details that relate to them.

What mountain peaks stand out in Foster's thinking?

Name some of the clusters of foothills. Are there portions that might be likened to lower lands upon which the elevations rest?

7. An article, "Tests for Ability before College," by J. B. Johnson, in *School and Society,* Vol. 15, gives further data supporting one of Foster's contentions. Imagine that you are Mr. Foster; find a place in the article to make an insert; using the following data, write a paragraph that might appropriately be inserted at the place chosen.

A student is considered to have a low record in the high school if he stood in the lowest one-fourth of his class. If the University of Minnesota had said in 1921 that students with a low record in their high-school work could not be expected to succeed in college, 66 out of 148 failures in the freshman work of that year would have been indicated at the beginning instead of at the end of the year. The actual standing in the freshman year of college of those who were low in their high-school marks is indicated as follows:

Rank in High School	*Record in College*			
	Failure	Condition	Low	Poor
	F	D	C-	C
Lowest 25 per cent	64	6	8	3
Lowest 10 per cent	28	5	1	1

It is evident that high-school performance largely indicates what college performance will be.

8. By comparing the selections of McMurry and of Foster, attempt to arrive at a distinction in your own thinking between an "investigator" like Dr. Reed, and an "advocate" like Mr. Foster.

Special Topics for Oral or Written Work: Grades, Scholarship, Success

1. My highest mark; how I attained it.
2. My poorest grade; what caused it.
3. A high grade I did not deserve.
4. A case supporting Foster's argument: "It pays to study."
5. An exception testing Foster's contention.

6. Should competitive grades be posted in our classes?
7. Making graphs of grades for display.
8. One quality of success which scholarship fails to test.
9. Have we a "gentleman's mark" in our school?
10. What makes a subject popular in our school?
11. The probable history of "a good fellow."
12. Why studying at home is better than work in the study hall.
13. When "luck" seemed better than earnest effort.
14. Seventy-five per cent as the "passing" mark.
15. A low mark that I deserved.
16. Are low marks an incentive for better work?
17. How a football player can keep up his school work.
18. Working for marks.
19. The characteristics of one of our good students.
20. School records as recommendations for positions.
21. Ought scholarship honors to be awarded at commencement?
22. Riding on one's reputation.
23. Who makes the chief decisions that determine success or failure?
24. The best inducement for earnest study.
25. The eligibility rules for our athletes.
26. Disapproving a low grade.
27. A suggestion someone gave me for improving my study.
28. How concentration helps in study.
29. How I shut out distractions in study.
30. How an habitual "bluffer" was caught.
31. Study conditions in our library.
32. A "study" suggestion for an editorial in our school paper.
33. Class-meetings in which we study instead of reciting.
34. "Regular" study hours.
35. What a business man says about the value of study.

SECTION IV

HOW TO STUDY[1]

FRANCIS C. LOCKWOOD

Reading Suggestions

The selection in this section was written for students just entering upon their freshman year in college. It is therefore quite different in nature from the chapter of McMurry who wrote for more experienced students, and from that of Foster who wrote for a general audience of magazine readers. The audience for whom an article is prepared always has a direct effect upon both the purpose and the substance which a writer employs. Note the following differences.

(1) Foster's "Should Students Study?" is bristling with facts and figures which all bear directly upon one central compact theme. McMurry's "The Nature of Study" is based upon facts which he does not minutely report. He contents himself with general truths about scientific experiments and indicates the bearings of these experiments upon the factors of study. In the article you are about to read, Lockwood also bases his thinking upon facts; but he does not assemble facts as Foster does, nor does he refer to facts which are outside his reader's personal experience as McMurry does. Instead, Lockwood refers to a wide range of facts which lie within the experience of his readers; he does not name them all.

(2) A second difference lies in the breadth of the central ideas. Foster has one very definite and narrow theme: scholarship pays. McMurry's discussion covers several elements of a larger but still relatively narrow theme, the factors of study. Lockwood has a much more inclusive theme.

In your first reading determine which of the four major lines of thought in Lockwood you will examine intensively in your second reading.

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[1]Reprinted by permisssion from Francis C. Lockwood's *The Freshman and His College*. Copyright, D. C. Heath and Company.

I

What are the real aims of study? The object of study is, in the first place, to get fast and firm possession of facts—facts of spelling, reading, mathematics, composition, history, language, geography, and the like. It is highly desirable that we should know how to spell *Chicago* and *business; Boston* and *brains;* and that we should know for all time. We want to know once for all that seven times nine are sixty-three; that Abraham Lincoln signed the Emancipation Proclamation; that an island is a body of land completely surrounded by water; and that a proper name should begin with a capital letter. Many, many, minute facts, as well as certain connected bodies of truth, should be embedded in one's memory as deeply and securely as a bullet that has lodged in the heart of a growing tree. And one should master certain processes of thought, and grip a few great underlying and unchanging principles of life and conduct.

Yet the chief value of study does not lie in the stowing away of facts and principles. You study for discipline. You study in order that you may become a student, just as you exercise, not for recreation alone, but that you may become an athlete. In making yourself a student you are making yourself fit for the fierce intellectual encounters of middle life. No time for training then! And woe to him whose brain-fiber is flabby then, whose mental processes are slow and hazy and uncertain! Your mind must work with the force and steadiness of a piston-rod; must clutch like a vise. You will be pitted against antagonists worthy of your mettle. They will not sleep; nor will they let you sleep during the long day of strain in the court-room, on the stump, in the halls of legislation, at the editorial desk, in the counting-house, where the tides of traffic run full and hot, and where masters of finance and captains of industry sit secretly, silently, astutely making or marring your fortunes or the for-

tunes of weak men and women whose champion you are. It may be that with knife or drug you will suddenly be set in the lonely night to hold Death at bay in some terrified home, or on some tragic highway or byway. You are winning these crucial contests now by the precision and the promptness and the thoroughness that you are working into your higher nerve centers; by the severe training that you are giving yourself in attention, decision, mental alertness, and moral control.

Again, it is worth while to study because there is nothing in the world so glorious as truth, nothing so fascinating as the pursuit of wisdom. Mind alone can unlock the meaning of the world. If we would be free we must think ourselves free. To the degree that we are ignorant we are slaves—slaves to wind and wave, to time and tide, to sin and pain, to man and devil and microbe. But to the extent that we study and think and gain wisdom, we drive back the barriers of darkness and come into the full freedom of our own free spirits. There is in us a divine curiosity that urges us to perpetual inquiry. We are set in this world to solve riddles. We study because there burns within us an unquenched and unquenchable passion to uncover reality; to drive out the bogies and the fetishes and the hoodoos that lurk in this human wilderness through which we are traveling. Study purifies and exalts the student. It loosens the bonds of Time and Space. Study enthrones a man with the gods. Through study we may escape into the infinite and the eternal; we may unite ourselves with God.

II

Study consists in focusing the mind upon the subject in hand. In very early life we have almost no power of voluntary attention; and even the mature scholar can hold his mind on a given object only for an instant by his own will power. The little child

scarcely has any mind that he can call his own. He lives out of doors, on the open highways of sensation. His mind is snatched hither and thither by the bright baubles and the entrancing sounds around him. He surrenders himself completely and on the spot to the last and gaudiest attraction that bids for his attention. We laugh at professors and philosophers for being absent-minded. In reality they are not absent-minded at all; they are so *present-minded* that they are utterly oblivious of their bodies and of everything around them. They have learned the art of study, and are giving attention mightily.

With children—and with many college students—it is exactly the opposite. Their bodies are chained to the tasks before them, but their minds are absent on other and more attractive pursuits. Now the trouble with many students is that they are still children. They have never learned how to hold their attention closely and sternly to a set task. They are given to dawdling and to idle daydreaming. They are at the mercy of every sensation and every enticement. An educated person learns "to do the thing he does not want to do, at the time he does not want to do it."

In the long run the secret of study resides in our ability to bathe our thought, our task, our lesson in the stream of interest. The way to study successfully and joyously is to be interested in the thing that claims our attention. It is not hard to interest a boy in a dog, or a gun, or a swimming-hole. Dress and travel and baseball and automobiles and dinner-parties interest everyone. But how remote these things all seem from the stupid rules and theorems and outlines and repellent facts that we find staring at us from our textbooks, and forever tripping us up in the classroom!

Yet, in reality, these two realms are not altogether removed from each other. There are connecting threads, if only we can find them. We must learn to carry over from the things that we do like, or the things that we are absorbed in, fragments or filaments of interest which may be attached to the dull or

hated study that we must master. Of course the surest and most natural way to bring this about is to live such an alert, wide-awake, and sympathetic life that the world speaks our language at whatever point we accost it. It is well to have sensations and experiences and some slight information, at least, stored up from many sources. The greater our store of facts, images, experiences, and associations from the past, the more likely we are to find some point of contact between a new subject and an old one, and so to transfer interest from one to the other.

If a subject seems hopelessly dry, one may approach it in some such way as this: It has interested other men; why should I be a stranger to it? Or, let one say to oneself: This subject, whatever its attractiveness or lack of attractiveness, is the sort of thing that comes to life out there in the world—the sort of thing that men are stumbling over on every human highway. What I study now is related to what I am going to do hereafter. Somewhere, sometime, in a moment of doubt, or need, or loneliness, or crisis, this little, hard, unattractive, apparently insignificant scrap of fact, bit of quotation, or statement of principle may saunter obligingly into my mind at need, and prove as welcome to me as would a comrade or a brother.

One may study with the thought of future travel. "He that would bring home the wealth of the Indies must carry out the wealth of the Indies." That is, we shall see only what we are prepared to see. Study with the thought of making yourself an interesting and resourceful conversationalist. Study, again, for the rewards of scholarship; or if this is no incentive, study in order to win honor for your "bunch," your fraternity, your family, your country.

And study, finally, if no other interest serves, *because you are a man*. It is nonsense to suppose that every step in education *can* be interesting. The fighting impulse must often be appealed to. Be ashamed of being scared at fractions, of being downed by the law of falling bodies; rouse your pugnacity and pride, and you will rush at the difficult places with a sort of inner wrath at

yourself that is one of your best moral faculties. A victory scored under such conditions becomes a turning-point and a crisis of your character. It represents the high-water mark of your powers, and serves thereafter as an ideal pattern for your self-imitation.

III

Bodily conditions largely affect mental activity. There is no teamwork so essential as the teamwork between brain and thought. The soil in which thought is nourished is the fine gray nerve-matter of the brain. The intellectual harvest from this brain-soil will depend upon two things—the original and inherited vigor of the nerve-cells of the brain, and the quantity and quality of the blood with which they are supplied. The delicate gray nerve-matter of the brain requires much good blood. Indeed, the brain is not unlike a great sponge, and the harder one studies the more plentifully it must be saturated with pure, rich blood. Like any other physical organ, the brain becomes exhausted after long-continued mental effort, and must have rest in order to regain its vitality. Prolonged hard thinking tears down and wears away the brain tissue. This waste matter, like a charred lamp wick that retards the free supply of oil to the flame, must be carried off and replaced by fresh material.

Sleep and exercise are the best means of working this change in the tired brain. And, always, much fresh air is required for this renewal. The mind is freshest and best fitted for hard work in the morning; so the severest tasks should be taken up as early in the day as possible. It is not a good thing, though, to study long and hard in the early morning before eating. On the other hand, it is poor policy to study late into the night; first, because the blood supply in the brain is then so charged with the products of decomposition, due to the wear and tear of the body during the activities of the day, that the mind cannot get clear and firm impressions; and, second, because the undue amount of blood that has been called to the brain tends to drive sleep away even

after one quits work. Each student should study his own case carefully and find out when and how he can do the best work.

Nor is it wise to study soon after a hearty meal. Since the digestive organs are heavily taxed at this time, they summon a large supply of blood from the brain and the other parts of the body. And, since there cannot be a proper supply of blood in both places at the same time, either the digestive organs will be robbed of their supply, with the result that digestion cannot be carried on properly, or the brain will be so impoverished that it must of necessity do poor work. For this reason, too, mealtime should be an occasion for leisurely conversation and good-fellowship; and for the same reason the time for at least a half-hour after a heavy meal should be spent either in the enjoyment of a short nap, or with music or light reading, or in some form of agreeable and easy physical exercise. The serious student will think out carefully a daily program of study and then adhere to it as closely as he can without doing violence to common sense.

Use your eyes with care. Do not strain them in the twilight, or use them when the artificial light is bad. Do not sit with your face to the light; beware of a light too powerful or dazzling. Sit so that the rays of light will fall over your shoulder upon the page before you. You will find it beneficial, when you are compelled to glue your eyes steadily to your task for a long period, to go to the window once in a while and relieve the eyes by focusing them for a brief time upon some distant object in the landscape.

Study is made easier by providing for bodily comfort during the time that one is closely engaged in thought, since nothing should take away from the vividness of the impression received by the nerve-cells. One should be seated comfortably; should not be too cold or too hot; should not be pelted and battered and shot through with noises from the street. A wise student knows when he has studied on a given occasion to the limit of efficiency, and then gives over. But it is a mistake to suppose that one cannot work unless one is in the mood for it. A normal

mind in a healthy body will work at need; and the best way to get the desired mood is to go to work.

IV

We should go about the preparation of a lesson as a general would set about the capture of a city; or as an engineer would endeavor to solve the problem of supplying a city with pure water; or as a detective would undertake the task of ferreting out a crime; or as you, yourself, would try to start a rabbit from a brush-heap. There is something at the heart of the lesson, and you must get at this the first thing. Ask yourself, What is the main idea—the interpreting thought—of this assignment? What is the key to this problem? What is the theme of this essay, the point at issue in this speech, the dominant or unifying emotion in this poem or drama? When once the student has seized this deeper inner meaning and has dragged it into the light, the minor points, the less important ideas, the illustrations, the examples—all these will fall into their proper places and will be easily understood and fully enjoyed.

But the ideas involved in a lesson are not to be introduced into one's anatomy merely as dead lumps of truth. They are to be reacted upon. Independent processes of thought must be set in motion. A boy ought to be excited by a new idea just as he would be excited by fresh tracks when out hunting. The material presented for consideration must be passed upon. It is to be arraigned before the high court of one's own thought. Let us not be too modest to think. Doubtless the textbooks are about right; and it is to be presumed that the professor knows vastly more than does the pupil; and no doubt wise heads have weighed the matter. But notwithstanding all this, the student now sits supreme. It is his court; he is trying the case for himself and not for another.

The student must next organize the whole matter that has been brought before him in accordance with his own purpose and his own needs, so that he may carry away with him his own compact and usable kit of new and important information. There is a

remainder of fact, or truth, or inspiration that results from the study of a given subject. This outcome of one's thinking, whether large or small, becomes a lasting personal acquisition. It is not merely the asset of an hour, but is a possession for all time. The student has it not by rote or merely on authority, but upon individual approval and acceptance.

Finally, knowledge results in permanent enrichment only when it has been put into play; that is, it must be related to life and must flow out in action. This explains why instructors frown upon "cramming." "Crammed" information is for immediate use; and it passes away along with the crisis that led to its acquisition. It is, then, not to be thought for a moment that the final end or outcome of an assignment is the presentation of it to the instructor in recitation or examination. That is to miss the point entirely. Knowledge that is worth while will become so much a part of the student that he will forget when and where he got it. Not only will he have it; it will have him. That is, in so far as it is a workable thing, it will become habit. For example, you do not count yourself an expert with your gun, your camera, your automobile—nor do you get much enjoyment from them—until their manipulation has become second nature to you. In the same way, no lesson can ever be said to have been mastered until it has entered into and become a part of one.

The sheer, brute work of memorizing does not amount to so much as is commonly supposed. When important subject-matter has been dealt with in some such way as has been suggested in the preceding paragraphs, one's nervous system will remember of its own accord. The things that have interested us supremely—that we have considered worth while and have made a part of ourselves—we cannot forget. They have enmeshed themselves in our central being, and will always be promptly available. There are certain things such as spelling, the multiplication table, the facts of geography, and the Ten Commandments which had to be laid up in memory by an outright effort of the will by frequent repetition. There always will be a good deal of this

pure memory work to be done; but, aside from stated demands of this kind, it will be of little avail simply to memorize mechanically.

Besides, the quality of any individual memory is a fixed thing. One's memory is either good, bad, or indifferent by nature. Each person is endowed with brain-stuff of a certain degree of power to take and hold impressions, and there will be no change of quality. Some minds are "wax to receive and marble to retain," and some are quite the opposite. This is not to say that the memory of a given person may not be stronger and more retentive at one time than at another. Whatever strengthens or weakens the general state of bodily health—in particular the general condition of the nervous system—will no doubt affect the memory as well. But it seems certain that at bottom the memory does not yield to cultivation.

Fortunately for most of us, however, that is not necessarily the best type of mind that has the most tenacious memory. It is a good sort of mind to have, but there are other qualities that may offset the lack of it. Some of the finest and most productive minds have been endowed with rather poor memory-stuff. The thing for a student to do is to find out and to practice the most approved methods of memorizing. That is all one can do; yet that may count for a good deal. Again, and finally, the best way to remember is to be so interested in a thing that one cannot forget it, and to connect it and inter-connect it with a thousand other interesting and familiar things.

CLASS ACTIVITIES

Problems for Discussion in Class

1. Discuss with data from the articles, the different applications of fact as made by McMurry, Foster, and Lockwood.
2. Restate the central idea of each article and discuss the difference in the breadth of the three themes.. Give examples of narrow and of broad themes from your own school work.

3. Tell which of Lockwood's lines of thought you chose for intensive second reading. Explain your choice.
4. Lockwood names three purposes or aims of study: (*a*) gaining definite knowledge, (*b*) mastering certain processes of thought, (*c*) grasping a few unchanging principles of work. With the third of these aims the activities of this book are largely concerned. What principles of study have so far been considered in Chapter I?
5. Do you know of a concrete case which illustrates one of the crises suggested by Lockwood on pages 48-49 in the professional life of a lawyer, a doctor, a merchant, a nurse, or a mother? How did discipline of mind come into play in that case?
6. "Present-minded and absent-minded." Apply this contrast in one of the following situations: A crisis in a football game; examination time; home-reading work; preparing a composition; a dress rehearsal.
7. Cite some instances when a scrap of information stood you well in hand.
8. With what principles of study considered by McMurry earlier in this chapter is Mr. Lockwood here primarily concerned?
9. After reading Lockwood, what do you think is meant by "mastery of material"?
10. Lockwood speaks of "your interests determining your world." In the light of his discussion, what is your world?

Group Problems for Class Work

1. Three kinds of data. We noticed on page 47 an important distinction which may be repeated here for a different purpose: Consider three kinds of data, as used by the men whose articles you have read in this chapter.

(*a*) Facts and figures. Example, Foster, page 39, "Of the 340 who entered college with conditions not 3 per cent won honor degrees in law."

(*b*) General truths, based on facts which are not reported in detail and which lie outside the average reader's knowledge. McMurry, page 24: "We have had three great epidemics of yellow fever in our own country since 1790."

(*c*) Reasons, based upon facts which might be presented if necessary, but which are unnecessary because they are very readily supplied from the reader's own stock. Lockwood, page 51: "And study, finally, if no other interest serves, *because you are a man.*"

Each of these writers, because of the nature of his subject, uses predominatingly one kind of data. However, each uses some of the other two kinds. In each article locate passages of the two kinds not named above as predominating. As an alternative for this assignment, find in any current magazine illustrations of the three kinds of data.

2. Getting at the heart of a question (see Lockwood, page 54; McMurry, page 23). Thomas Jefferson made a significant comment upon the parts taken by Benjamin Franklin and by George Washington in the discussion that preceded the founding of our nation. Jefferson said that he never heard either of these men speak more than ten minutes at a time, adding that they laid their shoulders to the main points, because they knew that if these points were established, the smaller points would follow of themselves. Lockwood has in mind the same essential features of good thinking in his Section IV. "There is something at the heart of the lesson, and you must get at this the first thing."

By class discussion consider the following process of arriving at the heart of the question:

THE ADVANTAGES OF A LITERARY SOCIETY

(*a*) Enumerate all the points that might be made:

(i) A literary society occupies the time of one long winter evening a week.
(ii) We have parties after the program.
(iii) It pleases our English teachers.
(iv) It gives us practice in speaking.
(v) We learn to work together.
(vi) It brings together pupils of different school classes.
(vii) It serves as the nucleus for our public dramatic performances.
(viii) We come in contact with some good literature.

Add other arguments which might be made in favor of a literary society.

(ix) .....
(x) .....
(xi) .....
(xii) .....

(*b*) To find the central ideas of "The Advantages of a Literary Society," rule out certain points, which may be considered side issues. With these omitted, you have left the heart of the question.

(i) Rule out points that are irrelevant, that have to do with something quite different from a literary society.
(ii) Rule out points that are petty or insignificant, of very little or of doubtful value.
(iii) Rule out points that are partisan, that appeal to only a very small group of people.
(iv) Rule out points that are personal, that apply to a single individual in a hostile or a too friendly way.
(v) Rule out points that are doubtful, that cannot be supported by fairly reliable data.
(vi) Rule out points that are obvious, so plain that they need only mention, not discussion.

(*c*) Through class discussion and board work arrive at the heart of one or more of the following questions:

(i) What constitutes a good high school?
(ii) What is "being a man," or "being a woman" in the sense used by Lockwood?
(iii) What is success in life?
(iv) How does excellent poetry differ from mere doggerel?
(v) What are the features of an interesting course?
(vi) What was Washington's service to America?
(vii) What makes a winning basket-ball (or any other) team?
(viii) What are the characteristics of "School Spirit"?
(ix) What characteristics are needed in a good class president?
(x) What is the value of effective speaking?
(xi) What makes an occupation, or "calling," attractive?

(*d*) No one need to search his experience far to discover many decisions that he himself has made by ignoring the main issues and allowing some relatively trivial matter to have undue weight. For example:

(i) A boy who accepts a permanent job because it pays $2.00 a week more than another, with no thought of whither the job will lead him. Why might this temporary advantage in money rightly be an argument in favor of a summer vacation job?

(ii) A girl who selects her friends because of the cut of their clothes.

(iii) A student who elects a course because it is a "snap" or a "cinch."

(iv) A listener who admires a certain speaker because he has a melodious voice and graceful delivery.

By class suggestions fill out the list of decisions made by ignoring main issues.

(v) .....

(vi) .....

(vii) .....

(viii) .....

(ix) .....

(x) .....

Topics for Oral or Written Discussion

1. A theme subject that was too broad; how I narrowed it.
2. The theme, the central idea, and supporting points of one of Lincoln's addresses.
3. A pleasing vs. a helpful theme.
4. When I missed some facts I should have learned.
5. When ignorance made me a "slave for the time being."
6. Is ignorance ever bliss? Is it ever "folly to be wise"? Explain.
7. The "mountain peak" and the "foothills" in a recent assembly talk.
8. When a genuine curiosity made a hard task interesting for me.
9. When the absence of curiosity made a task a bore.
10. The value of doing something one does not want to do.
11. How one of my teachers made a dull lesson interesting.

12. An apparently insignificant fact I was glad I knew.
13. When I study best.
14. Cramming that did not stay by me.
15. A statement about some detail of school life, supported in three ways: by a fact, by a general truth, and by a reason.
16. When I passed by a partisan or a doubtful argument to get at the heart of a question.
17. An instance in which a "side" argument carried too much weight.
18. My idea of a "rambling" talker.
19. Talking first and thinking after.
20. An article in *The Outlook* (or other journal) which "sticks to the point."
21. Side lines I avoided in my last history (or civics) paper.
22. A felt need that started discussion.
23. A lesson that was interesting because it had a purpose.
24. A reading habit in which I am weak.
25. How I learned that it pays to study.
26. An argument which started on one point and ended on another.
27. How sales-people avoid issues involving the objections to the articles they have for sale.
28. Finding the heart of a lesson.
29. When a seemingly trivial point became important.
30. A principal cause of failure in short talks.
31. An instance in a political campaign in which public attention was drawn away from the main issue.
32. A letter from a "vox populi" column in a newspaper which illustrates the ability or the failure "to stick to the point."
33. A habit of study I am cultivating.

ADDITIONAL READING PROJECTS

Select one of the titles; find the book or magazine, read the reference, and make a report to the class.

1. "Mode of Study," John Adams, *Making the Most of One's Mind*, Chap. V. Shows the value of concentration and thoroughness in studying.
2. "The Instruments of Thought," Nathan C. Schaeffer, *Thinking and Learning to Think*, Chap. V. Printed and spoken symbols are merely the representation of the writer's thought.

3. *Training Pupils to Study,* H. B. Wilson. Describes eleven factors in study.
4. *Teaching Boys and Girls How to Study,* P. I. Zimmers. The Parker Co., Madison, Wis. Shows that purpose in study and the use of results are valuable habits.
5. "Economy in Study," G. V. N. Dearborn, *How to Learn Easily.* Chap. I. Explains "false study"; five requisites for good study: good health, exercise, fresh air, good food, abundant sleep. Three chief ways of studying: seeing, hearing, doing.
6. "The Textbook as a Tool," A. L. Hall-Quest, *The Textbook,* Chap. V. Shows the best ways to use a book.
7. "Mental Second Wind," H. D. Kitson, *How to Use Your Mind,* Chap. XIII. Conditions of fatigue in study, and how to avoid them.
8. "Bodily Conditions for Effective Study," H. D. Kitson, *How to Use Your Mind,* Chap. XV. The title indicates the advice given.
9. "Under Glass," Percy Marks, *Scribner's Magazine,* Vol. 73, page 44. The real objective of a college education: not "to learn to make a living" but "to learn to *live.*" Students who plan to go to college should read this article.
10. "Improper Methods of Study," F. M. McMurry, *How to Study,* Chap. I. Shows the need of learning how to study.
11. "Your Work Is Worth Doing," R. L. Sandwick, *How to Study and What to Study,* Chap. I, page 5. Statement of the value of study.
12. "Why Study History? English? Mathematics? Sciences?" R. L. Sandwick, *How to Study and What to Study,* Part II, pages 87, 97, 111, 115. Presents the chief values in four principal lines of study.
13. "Effective Methods of Study," Frank W. Thomas, *Training for Effective Study,* Chap. VI. What to do to improve as a student.
14. "Studies Serve for Delight, for Ornament, and for Ability," Helen D. Brown, *Talks to Freshman Girls,* Chap. I. "Studies fit us to take our share in the day's work."
15. "The Nature of Study and Thinking," John Adams, *Making the Most of One's Mind,* Chap. IV. Explains the difference between *acquiring* and *applying* in mental work.
16. "The Proper Mental Attitude," G. F. Swain, *How to Study,* Chap. I, pages 6-21. The necessity of distinguishing between reading and understanding; reading with caution, yet with an open mind.

CHAPTER TWO

Useful Habits of Work in Library and School

To form a good habit, follow four principles: (a) *Begin with a strong determination;* (b) *Make an emphatic start;* (c) *Permit no exceptions; and* (d) *Find opportunities for frequent repetitions.*

SECTION I

TAKING NOTES ON READING REFERENCES

PRINCIPLES OF TAKING NOTES

Students are often called upon to cull out the essential parts of books and to preserve such material for future use in the form of notes. So large a share of school life is nowadays given to supplementary reading, and to the preparation of written and oral reports based upon reading projects, that note-taking has become one of the important requisites for excellent scholarship. Yet in this significant branch of their work many students develop haphazard practices, drifting along with notes in the form of miscellaneous scrawls on scraps of paper, forming no well-considered and definite plans of preserving in permanent form the results of their reading. The outcome of such lack of system is likely to be a very much lower standard of attainment than their native talents warrant.

Unsystematic records upon odds and ends of paper constitute one type of faults in recording the results of reading or listening. Even more serious is the careless selection of data which are to be copied into notebooks or upon reading cards. Students

scribble away in their laboratory books, desperately trying to take down "all the teacher says," if they are listening to lectures; or they laboriously copy in their books whole pages or entire chapters from assigned readings. Both practices disregard the primary principles of good workmanship which insist upon the omission of nonessentials, and concentration upon essentials. A good reader or listener is actively at work with his mind; he grasps the main idea of the passage read; he sees the order of the writer's ideas; he places value upon the various parts, especially noting the major and the minor elements. And then on the basis of his own critical selection, he copies into his records only the essential ideas and most significant data of the author, together with a brief record of his own reactions to what the author says.

Another very questionable practice is the taking of no notes whatever, and relying entirely upon unaided memory for the retention of valuable information. Doubtless some exceptional people can work in this manner. Lincoln is said never to have forgotten a single item of importance which he had once heard or read. If one were similarly blessed with retentive powers, he would be foolish to divide his attention between reading and recording. But the average mind needs the assistance of records; indeed, the very act of recording, when based upon careful thinking as described above, is likely to impress the material upon the student's memory. Moreover, if reading and listening are regarded not merely as receptive processes—if they are considered rather as reflective activities—then much of the matter recorded upon reading cards is the product, not of the author read, but of the note-taker himself. The fact is that an alert mind often has its richest ideas at the moment when it first encounters new matter. The first instinctive reaction is oftentimes the best. At any rate that initial reaction is worth recording for later consideration. And a written record of one's own thinking, even if it be but a hint or a catchword placed upon a reading card, is commonly of immense aid to the memory.

S. S. Seward, discussing the faults of note-taking just considered, explains:

The problem reaches back to a more fundamental one, as to how far the writer and the reader respectively contribute to successful study. That the reader, indeed, has a share, and an important one, in the undertaking, is the crux of the whole matter, and needs, therefore, thoroughly to be understood. The writer's part is clear; the reader's not so much so. One who benefits from study is not content to sit passively and be pumped into; that gives no play to his own mind. Nor will he be an automotive recording machine; that calls for industry, but scarcely for intelligence. His part rather is one of active mental effort. The writer's mind acts and the reader's mind reacts and assimilates; it recognizes important matter, observes digressions, takes note of illustrations, relates part to part, and distinguishes the true sense from other meanings likely to be confused with it.[1]

With the active, constructive work of the reader in mind, some excellent teachers refuse to allow their students to copy materials exactly as they hear or read them. Such instructors say, "The points that Mr. B. makes in his book are his. They are his statements of fact and his judgments. Put in your records only the barest outline of what he says; fill your notebooks as full as you please of what you think concerning what Mr. B. says. Let your records show primarily the results of your own thinking and your own judgments." Such teachers instruct students concerning assigned readings, "Copy very few sentences or paragraphs verbatim; instead, place in your notes a few headings to show the main order of the writer's ideas; fill the great part of your pages with your own critical reactions to what you read."

USING A LIBRARY

Before one begins to read and take notes, he needs, of course, to secure the books with which to work. Ordinarily he goes to a library to consult three kinds of references—books of general information upon his subject, the library catalogue of books,

[1]Adapted with permission from S. S. Seward's *Note-Taking*, page 3. Copyright, Allyn and Bacon.

and periodical indexes. Brief lists of such library materials are presented below with directions for their use.

(*A*) *References containing general information*

Encyclopedias:	Year Books:
Americana	World Almanac
Britannica	American Year Book
Nelson's Loose Leaf	New International Year Book
New International	Statesman's Year Book

Materials are located in such general reference books by looking up in the indexes the subject of inquiry, and turning to the appropriate volumes and pages.

(B) The library catalogue. A library or card catalogue is an index of the materials which the library contains. The cards are arranged alphabetically in the files as in a dictionary; that is, authors, subjects, and titles are all placed in one alphabetical arrangement. The cards themselves are of three kinds, known as "author cards," "subject cards," and "title cards."

An author card has upon its first line the name of the author, and is filed in the catalogue under that name.

```
537  Child, Charles  Tripler
C53      (The) how & why of electricity..
     Ed. 2, rev.      Van Nostrand, 1905.
```

AUTHOR CARD

A subject card has upon its first line the name of the subject treated by the book and is filed in the catalogue under that subject.

537 Electricity
C53 Child, C. T.
(The) how & why of electricity.....
Ed. 2, rev. Van Nostrand, 1905.

SUBJECT CARD

A title card has upon its first line the title of the book and is filed in the catalogue under the first word of the title which is not an article.

537 (The) how & why of electricity..
C53 1905
Child, C. T.

TITLE CARD

This arrangement of author, subject, and title cards enables the reader to use the catalogue in various ways.

(1) To find books by a given author, look for a card headed by his last name.

(*2*) For the life of a person, look for a card headed by the name of the author of the biography.

(*3*) For material on any subject, look for a card headed by the name of the subject.

(*4*) If you know the title of a book, but do not know the author, look for a card headed by the first word of that title not an article.

(*5*) Having found the book you desire, note the "call number" which is always found in the left upper corner of a card. This call number will enable you to give the librarians the information they need to find your book in the library stacks.

The call number consists of what is known as the classification number and the author's number. The most common scheme of classification is the Dewey decimal system, which divides knowledge into ten main classes and subordinates these main divisions with many more. The ten main classes are as follows:

0. General works
1. Philosophy
2. Religion
3. Sociology
4. Philology
5. Natural science
6. Useful arts
7. Fine arts
8. Literature
9. History

(*C*) *Periodical indexes to references in magazines.* These furnish a means of locating references in current publications. The two most commonly used are Poole's *Index to Periodical Literature* for English and American magazines, 1802-1907, and *Reader's Guide to Periodical Literature*, 1900 to date. In both of these guides, there are three different ways of arranging information for the convenience of the library worker.

(1) Material arranged by *author* entries: the name of the author of an article; the title of the article; and the reference to the magazine which contains the article. For example,

Mullet, Mary B.
"Four Big Men Become Boys Again." *American Magazine,* 87: 34-7, Feb., '19.

(2) Material arranged by *subject* entries: the name of the subject; the title of the article; the name of the author; and the reference to the magazine. For example,

Inventions
"How Edison Won the War" (Editorial Comment), *Literary Digest,* 67: 26-7, Oct. 23, '20.

A fourth item often appears in the subject entries, namely, cross references to other articles upon the same or closely related subjects.

(3) Materials arranged by *title* entries: the title of a poem or story; the name of the author; and the reference to the magazine. For example,

"Glimpse from the Train." T. Hardy: *Lit. Digest,* 64: 38, Feb. 28, '20.

Obviously, the library worker makes use of the periodical indexes first by finding in the alphabetical arrangement the author, the subject, or the title he desires; second by choosing the most promising references under the heading thus found; and third by locating the magazines which contain the articles of largest promise for his purpose.

EXAMPLES OF NOTE TAKING

Suppose that a member of your class had found in the library and was reading "The High School Library," Chapter IV in Sophia H. Powell's book *The Children's Library.* The early parts of Miss Powell's chapter have pointed out that school experiences should teach pupils to enjoy reading. Then

follows the passage given below. Read it with this problem in mind: What entry, if any, would I make in my reading notes concerning this passage?

Librarians have fancied that the craving for romance might be satisfied only by old tales and by certain good literature. No book can kindle the imagination as does scientific investigation. Science has introduced a new element of discovery, conquest, and adventure; a new idealism and a new idea of culture—the discovery and conquest of natural forces, as thrilling as any tales of old; the idealism made possible by the discovery of an absolutely truthful universe, with which we must keep ourselves in tune; the culture which comes with the power of adjustment to this universe of law and order. Books of science which can present these truths without sentimentality are needed in the high-school library as supplementary to the laboratory and to textbooks.

There has been a tendency in writing about the high-school library to overemphasize its literary functions. This tendency has been common to those interested in vocational training as well as to librarians interested in the purely literary side of high-school library work. It should be emphasized that the vocational school cannot do without the library either on the cultural side or from the practical viewpoint. Vocational training schools need a library strong in their special branches and in books with a more specific cultural value. Likewise—and this librarians are likely to overlook—as the academic high school is being more and more changed into a high school where both vocational and academic subjects are taught, so the high-school library, even when its chief function seems to be literary, cannot neglect the cultural values of the vocational studies and the books which represent such values. Librarians sometimes say that such books are few. Is not their interest in this kind of literature more feeble than in that which has what is called "cultural" values?

There is another sort of romance which may be presented to young people: the romance of modern industry. Just before his death William James declared that the modern heroes are to be found on the railroads and in the shops; that the soldiers of today are the doctors and the nurses who fight disease.

This is the message of Whitman:

Away with old romance!
Away with novels, plots and plays of foreign courts,
I raise a voice for far superber themes for poets and for art,
To exalt the present and the real,
To teach the average man the glory of his daily work and trade,
To manual work for each and all, to plow, hoe, dig,
To plant and tend the tree, the berry, vegetables, flowers,
For every man to see to it that he really do something, . . . for every woman, too;
I say I bring the Muse today and here,
All occupations, duties, broad and close,
Toil, healthy toil, and sweat.[1]

Two sample reading cards which might be made by different students upon Miss Powell's paragraphs are given below. The form of the cards, to be sure, might be different, depending upon the reactions of the student to the materials read.

A sample reading card:

Reading in High School. Pleas for Romances of Industry, Powell, Sophia H., *Children's Library,* p. 97.

"The high-school library, even when its chief function seems to be literary, cannot neglect the cultural aspects of the vocational studies and the books which represent such values."

Argument—there is romance in modern work, industry, present-day life, to be found in books; this romance needs to be revealed to high-school pupils, as well as the romances of more purely "literary" books.

Reminds me of textbook *The Romance of Labor* in our 9th grade.

[1]Reprinted by permission from Sophia H. Powell's *The Children's Library.* Copyright, H. W. Wilson Company.

Another student might make this card:

> Danger of Neglecting Best Literature, Powell, High-School Library. *Children's Library,* pp. 96-7.
>
> Argues for the reading of scientific and practical books in the high-school library. Quotes Whitman:
>
> "Away with old romance! . . . .
> Exalt the present and the real, ...
> The glory of his daily work and trade, ...
> I say I bring the Muse today and here, . . ."
>
> Danger in this—seems to speak slightingly of good literature. Might be so interpreted. Two kinds of reading—one for information, one for culture and refinement; need both.

An examination of these two samples reveals characteristics which may be taken as the marks of good workmanship in the preparation of such reading cards:

(1) The first item on each card is a topic, in the reader's own words, indicating the nature of the note. Such a topic is a valuable aid when the worker later makes use of his cards.

(2) In a conspicuous place is indicated an exact reference to the source, namely, the author's name, the title of the book, and the page or pages.

(3) Direct citations from the author are copied verbatim, enclosed in quotation marks, with all omissions indicated by dots (. . .). The citations endeavor to record the main idea of the author in the passage read.

(4) The first card includes a short paragraph in the student's words summarizing the main argument of the passage from Miss Powell's book. This record here given in the form of a summary might easily be changed into an abstract of the passage.

(5) The last item on each card records the reader's reaction to Miss Powell's major idea. The reaction on the second card is in the nature of a criticism.

(6) Each card contains but one unit of thought from the book read, the theme of which is stated in the topic upon the top line. To be sure, the single item may have two or more aspects, all on the same card. If the face of the card does

not furnish sufficient space, the back may be utilized also. It is a good rule never to include upon one card more than one of the author's main ideas.

(7) The cards commonly used are 3 by 5 inches, the size of library cards. Some workers prefer 4 by 6 inches. The size is immaterial, except that the larger cards furnish more space. Experienced workers often use thin paper, sometimes of different colors, which can be filed in a pasteboard box. The contrasting colors often are a great aid in classifying notes.

The seven points just enumerated are characteristics of good reading cards. If the worker prefers to use a notebook rather than cards for his notes, the same general form of reading records is advisable. The endeavor to use notes that are run together promiscuously in a closed-leaf notebook is often very exasperating. From a loose-leaf notebook, on the contrary, sheets may readily be taken out, and rearranged and reclassified as the bulk of reading notes increases. Obviously a loose-leaf book of small size is more economical for reading records than a larger book.

ASSEMBLING NOTES FOR A REPORT

A task more common in high-school life than the taking of notes from general reading is the assembling of material for a written or oral report on an assigned topic. Suppose that in history or in science a student is assigned the topic "Thomas A. Edison." The student's classmates know Mr. Edison as a great inventor who specializes in electricity and in the reproduction of sound; and this is about the extent of their information. What data shall the student assemble to give his classmates a more complete and reliable acquaintance with the modern wizard of science? How shall he go about collecting that data? What reading notes shall he take?

(1) *Ascertain what material is available.*

(*a*) Standard books:
Who's Who in America.
Encyclopedias.

(*b*) Card catalogue in library.

TK140 Edison, Thomas Alva, 1847-
E2J7 Jones, Francis Arthur
Thomas Alva Edison; sixty years of an inventor's life, by Francis Arthur Jones; with numerous illustrations from photographs. New York, T. Y. Crowell & Co. [1908].

SUBJECT (BIOG.)

T39 Inventors
H9 Hubert, Philip Gengembre, 1852-
Inventors, by Philip G. Hubert, Jr. New York, C. Scribner's Sons [1896].

TITLE CARD

TK140 Edison, Thomas Alva, 1847-
E2C7 [Cooper, Frederick Taber]1864-.
Thomas A. Edison, with seven illustrations from photographs. New York, Frederick A. Stokes Company [1914].

SUBJECT CARD

Call slips, upon each of which the student copies the call number, the name of the book, and the author, are presented at the librarian's desk, and the three books obtained for home use. The latest of these three books was published in 1914.

(*c*) *For more recent information turn to magazine accounts.* In *The Reader's Guide* the searcher will find the following articles listed:

EDISON, THOMAS ALVA

"Four Big Men Become Boys Again," *American Magazine,* Vol. 87: pp. 34-7, Feb., '19.

"How Edison Won the War," *Literary Digest,* Vol. 67: pp. 26-7, Oct. 23, '20.

"Throwing a New Light on a Great Inventor," *Current Opinion,* Vol. 69: pp. 45-8, July, '20.

"Giving Employees a Goal to Work Toward," *System,* Vol. 40: pp. 702-3, Dec., '21.

"Sidelights on Ford and Edison as Seen by John Burroughs," *Current Opinion,* Vol. 71: pp. 742-3, Dec., '21.

"Why So Many Men Never Amount to Anything, an Interview with Edison," *American Magazine,* Vol. 91: pp. 10-11, Jan., '21.

(2) *Read and assemble material.* The smaller book from the Great Men series bears the date 1914, while *Inventors* is dated 1896, and *Sixty Years of an Inventor's Life,* 1908. The later book has seven chapters; from an examination of the headings of the chapters the student sees the possibility of discussing such topics as: Edison's ancestry, his childhood, his work as a telegraph operator, his career as an inventor and manufacturer, three of his important inventions, his personality, his war record.

To arrange the material in usable form, notes are imperative. There are three types of notes: the topical outline; the summary, which assembles the facts given in the reader's own words; and selected quotations from the author. All may be accompanied by the reader's comments, as indicated on page 76.

SAMPLE READING NOTE: TOPICAL OUTLINE

Edison—personality. Jones, *"Sixty Years of an Inventor's Life,"* pp. 290-312.

1. Friendly, genial, unaffected.
2. Marvelously alert and energetic; works 18 hours a day.
3. Unconventional in dress.
4. Practical; believes in financial return; thrifty.
5. Absent-minded: forgets his name; forgets meals.

Point 4 especially is contrary to our usual idea of inventors.

SAMPLE READING NOTE: SUMMARY IN THE READER'S OWN WORDS

"How Edison Won the War," *Literary Digest* 67: 26-7, Oct. 23, '20.

I. Edison and the war.
   A. War inventions.
      1. Device for detecting submarines.
      2. Device for turning ships quickly at right angles.
      3. Collision mats for minimizing loss from torpedo attacks.
      4. Methods of camouflaging vessels.
      5. Oleum cloud shells.
      6. High speed signaling with searchlights.
      7. The preservation of submarine guns from rust.
   B. Jan. 1917 Edison agreed to Secretary Daniel's request to devote his time to the study of ways and means of aiding the government in case of war. Mr. Edison put his affairs entirely under the charge of others and gave all his time for two years to the government.
      1. He gathered a corps of engineers who were in his employ at the time, and others from leading colleges and universities as well as those that could be spared from the larger industrial plants.

SAMPLE READING NOTE: SELECTED QUOTATIONS FROM THE AUTHOR

"How Edison Won the War." *Literary Digest* 67: 26-7, Oct. 23, '20.

Device for Detecting Submarines.

"Convinced that if he could install on a ship a device—always be from ten to twenty feet ahead of the bow of the vessel and if this device should carry a vibrating diaphragm, it would not have to contend with the noises of the ship itself (as these would be —— made inaudible).

"This device was afterward given practical tests in very rough seas, fulfilling all requirements, and was not in any way damaged—even in the roughest sort of cross seas, with the vessel going at full speed—fourteen knots per hour.

"With this device boats moving seventeen hundred yards away could be readily heard while the vessel was going at full speed. The submarine bell five and one-half miles away could be heard by the operator while a big storm was in progress and the boat proceeding at full speed, and this only with plain diaphragms.

"With this device there would be no difficulty whatever in hearing a torpedo more than four thousand yards away, and that is far beyond the effective distance at which a torpedo can be launched from a submarine. The noise made by a torpedo is very piercing and peculiarly distinctive."

As explained above, the worker who has been diligent and accurate in assembling carefully arranged material from his reading finds the task of organizing and writing his article comparatively easy. The topics, in the most conspicuous place on various cards, often furnish him valuable suggestions for the main divisions of his report. Moreover, since there is only one reference on each card or sheet, the pack is easily distributed into the order in which the various items are to appear in the finished paper. Still further, the student finds that much of the thinking which is to constitute his own discussion is suggested by the personal reactions which he placed upon the cards while he

was taking notes. One who has felt the satisfaction of having reading materials in workmanlike shape, as he sits down to prepare a report, is not likely in the future to neglect such an easily attained aid, making both for economy in workmanship and value in the finished product.

CLASS ACTIVITIES

Exercises

Make definite plans for 1, 2, and 10; work in class upon some of the others.

1. Take notes of an assembly talk. Compare your notes with those of your classmates. See if you agree on the main points.

2. The next time you have oral discussions in any class, list the main points of the speakers. If you find difficulty, determine whether the fault lies with you or with the speakers.

3. Read the selection beginning on page 80.
   (*a*) Make a list of the main points in the entire article.
   (*b*) Select the most important thought in each paragraph.
   (*c*) What is the relationship between the first and the second main points?

4. Have someone read in class part of a lecture by a noted speaker. Test your ability on the first reading to get the main points; on the second to fill in with the details and illustrations needed for a clear understanding of the lecture.

5. Examine reading notes which you have prepared for any of your classes. Which of them are summaries? Change some of them into topical outlines. Which of your notes are quotations? Write a summary for one or more of these. Which do you prefer: the quotation, the outline, or the summary? Why? When is each appropriate?

6. Make a topical outline of one of Lincoln's shorter addresses. Write a summary of it. Why are you likely to want to use direct quotations?

7. Someone has said that copying extensive notes from reading may be a sign of industry but not of intelligent workmanship. Support this statement.

8. Each student should name three subjects suitable for reference work through *The Reader's Guide.* From a class list placed on the board, let each select one subject, look it up, and report to the class.

9. Class contest: Let each student prepare a set of three to twelve reading cards on a chapter or article assigned by the teacher. Submit these cards, without names, to a committee from another class. Request the committee to select the three best sets of cards judged by the standards on page 72. Perhaps you can plan for such a contest among the various English and history classes in your school.

10. Bearing in mind that you cannot tell everything, make an outline for a short talk on some important current topic. A committee may select three of the outlines and request the authors to give their talks to the class.

11. If you are near a library consult the magazine indexes and find a reference to: playing tennis; Mr. Coolidge's family; Carl Sandburg's poetry; polar expeditions; radio; the "All-American football team"; the Spanish war in Morocco. Copy exactly the data from the index for one reference on each subject.

12. Library exercise: Divide among a group of the class the points in the following passage which may be looked up in your school or city library. Find suitable references and prepare suitable reading cards.

The library is the one place where time and space are set at naught. It is the microcosm of the universe. Here all the wonders of nature are flashed back from the mirrors of eyes that have beheld them.

Here India and the Arctic and the isles of the sea are as close at hand as Niagara.

Here Archimedes's lever, Giotto's circle, Newton's apple, Palissy's furnace, Jacquard's loom, Jamie Watt's teakettle, Franklin's kite, are cheek by jowl with the latest Marconigram.

Here the fate of Aristides, of Columbus, of Gordon, is as clear to read as the doings of yesterday in Chicago. The record of what happened at Thermopylae, at Lucknow, at the Alamo, receives beside it the tale of the courage that rose as the Titanic sank.

What Buddha and Socrates and Jesus taught answers the cry and strengthens the heart of doubt and pain today. The library is the great whispering gallery of noble deeds and, catching a whisper,

"The youth replies, I can,"

and goes forth.[1]

[1] From "The Public Library," Mrs. H. L. Elmendorf, *Public Libraries,* Vol. 17, p. 302.

SECTION II

SENSIBLE ACTIVITIES OF SCHOOL LIFE[1]

F. E. Bolton

Reading Suggestions

(1) Professor F. E. Bolton's article, which you are now to read, was written primarily for students of about your age. This is evident from the joke he repeats about sophomores when he quotes Woodrow Wilson as saying: "A sophomore is one in whom the sap is rising but has not yet reached his head. He will eventually mature." Will you help prove that the article is appropriate for your class?

(2) Mr. Bolton discusses six phases of school life. Read with this question in mind: For which of these parts does my present experience in school give me supplementary and supporting material?

(3) Reread very thoroughly the division which you select. Write out the topic of the division; write out also the most significant sentence in the division. Then write a brief paragraph of supporting evidence from your present school experience. Put this upon a reading card as suggested on pages 75-77.

I. BODILY VIGOR

To secure the highest mental efficiency we must give due consideration to bodily culture. Any education which disregards this is a failure. Every student should have sufficient food, adequate sleep, proper exercise, abundant recreation; in every way he should seek to promote bodily vigor.

[1]Adapted by permission from "Ethical Aspects of Mental Economy," *Popular Science Monthly*, Vol. 71, pages 246-257, and from F. E. Bolton's *Principles of Education* and *Everyday Psychology for Teachers*, copyright by Charles Scribner's Sons.

No absolute rules can be laid down with reference to periods of work and rest, because there are great individual differences in this as in other characteristics. Some persons can walk only a short distance without great fatigue, while others can tramp all day without rest. Some can do heavy physical work, but only at a slow pace, while others work by spurts and then require rest. Similar conditions obtain in mental work. Some people work fourteen hours a day the year round without a vacation, while others seem never to be at work, but really accomplish astonishing results because of the intensity while occupied. Similarly, students vary greatly in their methods and powers of mental work.

It is often maintained that during the morning hours far more work can be accomplished than at any other period of the day. Sometimes people think that the nighttime is itself responsible for fatigue and the morning hours for the abundant vigor. According to this idea, then, would not the daytime hours be the best for invigoration through sleep? Doubtless the best work is usually accomplished with the least effort in the morning, after a night's refreshing sleep. But it is probably true that such is the case because of the sleep, and rest, rather than because of the time of day.

Sleep as a factor in student life does not receive adequate consideration from many students. The student who does not take regular and sufficient sleep is pilfering his own bank account. There is absolutely no substitute for it, and when once lost, restitution cannot be made even by a nap in the classroom. Nervous tissues exhausted by a day's activities can be restored only by sleep. Nine hours of sleep and a good breakfast would not be a bad rule to guide student life. Parties, athletic jaunts, examination crams, and even working for one's living, which cause students to remain awake beyond the midnight hour, transgress all laws of mental and physical hygiene. There is doubtless no cause so frequently producing nervous breakdown as loss of sleep.

II. ASSOCIATIONS

The student who goes to school to become a hermit, not touching elbows with his mates and developing no interests through hearing music, attending lectures on varied subjects, seeing nothing of the great busy world about him, misses a vital factor of school life. His procedure is uneconomical, for when he enters the busy, bustling world, he will find himself behind the procession. Because he has not seen the larger world while acquiring his book knowledge, he will often feel that the world is somehow out of joint because it does not conform to his bookish ways. To become efficient he must begin again and study the world about him. He must gain its viewpoint, adjust himself to it; he must now try to gain friendships which should have been established during his school life. All this is a wasteful, selfish process.

On the other hand, some students need to be cautioned when they make the opposite and equally grave error of saying, "My associates teach me more than my books and class work." Possibly they do, but it is not the fault of the books nor of the classes, nor any compliment to the associates. Another says, "I study men, not books." This is sound, if rightly interpreted, but the student should know that there are some men besides fellow students well worth knowing. Some of them can only be known by going to their books. He should learn to study individuals as well as masses, the world's teachers as well as his own classmates; he should look up as well as around. The school training is certainly a failure if it has not given the student lasting acquaintanceships with a few superior students, some great men on its faculties, and many of the world's intellectual wise men who can only be known through the pages of history and the great literatures of all ages.

It is through books and master minds that the student should get meaning for all his varied observations and activities. To regard books and class work as something to be endured is to

miss the whole point of education. Schools are founded and maintained for the specific purpose of furnishing books and teachers; all class work, once selected, should have the right of way. Student programs should not be overloaded; they should be so arranged that all the healthful activities may be duly emphasized. Recreation as well as work should become a part of one's religion. The gospel of relaxation needs evangelists as well as the gospel of work.

III. HOW HABITS ARE MADE

It is important for the student to understand early the force and value of habit. Much time is lost by every one of us because our early training did not render automatic all those activities that we have to perform constantly and in the same way. Purely mechanical work can be controlled more economically by lower nervous centers than by higher. In childhood and youth the nervous system is plastic, a prime condition for memorizing and fixing habits. Among the habits that should become ingrained during this period are those of correct bodily postures and activities, correct speech, command of the multiplication table, spelling, writing, and habits involved in learning to speak foreign languages. Most habits are controlled by the spinal cord, which is early developed. Hence we should form habits early, so that the brain may be relieved later of mechanical work and be concerned with higher operations.

As Dr. Balliet has observed, "At first a child uses his brain in walking; later he can walk from habit and walks therefore with his spinal cord." At first we spell with painful consciousness; later we spell familiar words of our vocabulary with little or no consciousness. We should be trained to write and spell mainly with the spinal cord, and to use all our brain power in thinking the thoughts to be expressed. We do many things with the spinal cord to relieve the brain. We walk with the spinal cord; we write and spell with the cord; I suppose we knit and gossip with the spinal cord; indeed, we sometimes sing and pray,

not with our hearts, nor with our brains, but with the upper part of our spinal cords. We raise our hats to each other, not with our brains, but mainly with our spinal cords; when we meet people whom we do not wish to see, we often shake hands mechanically with our spinal cords. When we are learning a habit we must be conscious of it. The boys will remember how they had at first to think of taking off their hats to ladies. Later, they perform the act without thinking. In short, the nervous control has shifted from the brain centers to the spinal cord centers.

Not only do such elementary physical activities become automatic, but processes of judging and reasoning must also become largely mechanical before becoming serviceable. One's thinking is largely specialized, and judgment outside of the well-beaten track of thinking is not very valuable. The lawyer's opinion concerning disease is slowly formed and unreliable; the doctor's judgment about legal matters likewise is of small value. The expert in a given line is one who has studied widely and who can form instantaneous judgments because of the habitual consideration of the data. Difficult studies pursued through a long time until mastery is complete become as simple as the alphabet. Mathematicians become so familiar with calculus that they read it for recreation when fatigued with other work. The lawyer can instantly cite scores of cases and precedents for which the novice would have required hours to summon to the foreground of consciousness. Hence, when knowledge is to become usable it must be pondered long and every detail absolutely appropriated.

Even the will is much more a matter of habit than we usually think. The will is too often regarded as a sort of ghost which pursues us about, compelling us to do certain things and prohibiting us from doing certain other things. Everyone is supposed by popular belief to have at birth a will of unchangeable quality and quantity. This is absolutely incorrect. The child has impulses, but has practically no will. His will must grow and develop. We use the will when we perform actions which we control. When we lack control, either muscular or

mental, we lack will, or possess a diseased will. When a child can pick up a pin, thread a needle, tie a knot, walk without tottering, run, and talk plainly, he manifests definite mental and muscular control and therefore manifests voluntary power.

IV. INDEPENDENCE OF THINKING

Independence of thinking is another rare but thoroughly important mode of activity. Many people are so unused to thinking for themselves that they would be frightened at the appearance in consciousness of a thought really their own. It has been said that "animals think not at all and some men a little." Most of the thinking of the world is carried on by a few individuals. The rest of the world are mere echoists. This is a terribly wasteful process. If more people were independent thinkers there would not be a yearly output of millions of barrels of patent medicines, the main ingredients of which are alcoholic preservatives. Soothing sirups with opiates are fed to children because they are said to cry for them. The children are quieted, oftentimes so effectually as to be stupid through life. "Harmless vegetable remedies" is a magical phrase. Perhaps this is why so many take extract of hops and barley, spirits of corn, nicotine, and opium!

Because of lack of independence of thought, superstitions have always hindered the world's progress. Even today the number 13 is so ominous that you cannot get a room number 13 at a hotel, and you can scarcely have thirteen at a table. Friday is considered so unlucky that some steamship companies hesitate to make sailing dates on that day of the week. Farmers still plant their potatoes "in the moon," and old women carry potatoes in their pockets to cure rheumatism. Only a few days ago I saw a man who had a rattlesnake's tail in his hatband to ward off rheumatism. Clairvoyants and fortune-tellers apparently find plenty of dupes, if we are to judge by the wealth of their advertising. Thus on every hand we find ample evidence that people are sinning and being sinned against simply because of their own unwillingness or inability to think.

There is much in modern student life that militates against the deepest thinking. With the multiplication of student activities, have not the opportunities for quiet thinking decreased? With football, baseball, basketball, tennis, rowing, skating, the literary society, the dramatic club, the freshman banquet, the sophomore cotillion, the junior prom, the senior hop, numberless parties, the various church, social, and other engagements, besides the loafing hour, the theater, concert, special lectures galore, the newspapers and magazines to scan, one might well exclaim, "And when do they find time to think?"

Many students engage in altogether too many activities. In my own observation I have known several who arrested their development badly by putting too many irons in the fire. A student's popularity is not infrequently the cause of his intellectual arrest. By attempting debates, athletics, dramatics, study, and society, all at the same time, his energies are dissipated, his growth stunted, while his plodding companion by everlastingly keeping at a few things finally becomes a master and frequently astonishes even himself as well as his acquaintances. The student must learn to say *no* to the siren's voice which continually beckons him on to new fields.

I sometimes feel that there ought to be some course labeled "thinking" in which the individual should be isolated from everybody long enough really to empty his mind of all ideas which are merely echoes, and then to discern what are really his own. With all the distractions of active life, the time may come when it would be a blessing for the state to imprison a few great men each year and allow them only pen, ink, and paper. It may have been fortunate for the world that John Bunyan languished in prison until his thoughts had had time to germinate and come to full fruition. Possibly the blind Milton, shut away from the distractions of sight, may have looked within and discovered thoughts that had been struggling for expression, but had been stifled by the many distracting interests possessed by a man of keen sight.

V. STUDYING AND CRAMMING

While we have rightly emphasized group activities as an aid in developing altruism, I wonder whether students do not sometimes misinterpret its meaning. Self-activity is fundamental in the process of acquiring knowledge. No knowledge is of much value that is not made one's own personal possession. This means more than the recital of words and formulas gained from books and companions. In their desire to be helpful, I sometimes see students in groups, even sitting on the stairways when the crowds are passing, believing they are *studying* together. When one hears the bits of gossip interspersed between the formulas, the declensions, and historical dates, one wonders where the calm reflection, deep concentration, analysis, comparison, doubt, contemplation, deliberation, complete abstraction, enter in.

In student life it is important to master thoroughly a task as speedily as possible. To skim over a lesson and leave it without mastery is wasteful. The skimming process may be repeated a dozen times in this way and leave the lesson only half learned. Hence, "Whatsoever thou findest to do, do it with all thy mind and with all thy heart and with all thy strength." In mastering things "for keeps" two attitudes are necessary—interest and attention. Attention is the mother of memory; interest is the mother of attention. Hence, if you would secure memory, you must capture the mother and the grandmother. It is the business of us all to be interested in what we do, and it is unethical to regard our work as drudgery. I sometimes say to students, "You never will be great successes until your work has come to occupy all your waking moments and even your hours of sleep. It must be your life. If you wish to know what you are interested in, just catch yourself suddenly when you have no prescribed task, to see what you are thinking about. Those great dominating, insistent ideas indicate your real interests."

May I say a word on the question of cramming for examinations? The method is a delusion and a snare. Ideas are not

grasped, associations are not made, brain tracks are not made permanent; and even though the student might pass an examination on such possessions, mental possessions gained by cramming, like the notes of an insolvent bank, are found to be worthless trash when put to real use. The cramming process may leave one, not with wisdom more to be prized than fine gold, but only with bogus certificates. Make your mental acquisitions absolutely your own while going over the subject day by day, take ten hours of sleep before every examination day, and do not fear the results. In trying to make possessions most permanent, I give frequently the following recipe: Study your lesson as if you expected to teach it. When you can teach it to someone else you possess it. Try sometimes actually to teach your lesson; inflict it upon an imaginary pupil. Someone has said, "I do not lecture to instruct others, but to clear up my own ideas."

VI. VALUE OF EARLY YEARS

Students should early recognize the importance of making the most of the morning of life. Biologists emphasize the economic value of the period of infancy. By infancy I do not mean alone the period when the child is in the cradle. Biologically it includes all the period of life from birth to maturity. It is the period of educability, the period when the individual can be molded and modified—in other words, educated. The longer the period of infancy, the higher the degree of educability. The newly-hatched chick has a short period of infancy. On emerging from the egg, it can perform almost all the activities which it will ever be able to perform. It has very little to learn, very little possibility of learning, and very little time in which to learn. The young dog has more to learn, a longer period in which to learn it, and larger possibilities of acquiring new activities. The human being has the longest period of infancy. After this period, the possibilities of education grow less and less.

To young students who may read this, I desire to give a few words of comfort. You may be frequently derided by the upper

classmen, who call you "greenies" or "freshies." Take comfort and regard the name "freshmen" as a mark of honor rather than derision. To be fresh or to be green means that you are still growing. All should wish to be green and to grow as long as possible. May you live to a green old age. Even the sophomores are all right. Woodrow Wilson said, "A sophomore is one in whom the sap is rising but has not yet reached his head. He will eventually mature."

Professor James says that one seldom gets an entirely new idea into his head after thirty. After that period one may erect a splendid structure upon the foundation already laid. But if any subsequent structure is to be reared, the proper foundation must have been laid before that time. For, "Outside of their own business," says James, "the ideas gained by men before they are twenty-five are practically the only ideas they shall have in all their lives." We cannot get anything new, for the period of curiosity is past, instincts have died out, bonds of association have become fixed, "mental grooves and channels set, the power of assimilation gone." Hardly ever is a foreign language learned after twenty spoken without a foreign accent. "In most of us, by the age of thirty, the character has set like plaster, and will never soften again." The most possible should be made of early life, for, although it is a fact that the number of cells in a given brain is complete at birth, yet mental exercise must determine the number that become fully developed. Moreover, the period for development lies largely between birth and maturity. It is the period when nerve matter is plastic and when growth and replacement exceed disintegration.

Brain workers do their best between the ages of twenty-five and forty-five; before that they are preparing for work; after that their work, no matter how extensive, is largely routine. Lawyers and physicians do much of their practice after forty, but the learning was accomplished before forty or forty-five. Successful merchants lay the foundations for wealth and success in youth and middle life. The great men that we know are

usually old men; but the foundations for their greatness were laid when they were young.

Statesmen have projected their greatest acts of legislation, diplomacy, and reform in early life. In the morning of life scientists have wrought out their data and practically formulated their theories; generals and admirals have gained their greatest victories; lawyers have paved the way for leadership at the bar, physicians have laid the groundwork for their greatest discoveries; poets and artists and musicians have planned, and in many instances executed, their greatest masterpieces.

You, young men and women of the high schools and colleges, are selected individuals. A process of selection and sifting going on for many years in your own lives, and for generations in your ancestors, determined who should go to the higher schools. The state endows its schools to enable its best minds to secure the development which their native worth makes possible. The function of the school and the college is not to create brains, but to mature them. The school is like a problem in multiplication in which the student is the multiplicand and the institution the multiplier, and, as in mathematics, if we have significant figures for our multiplicand the result is significant, but if we have ciphers for the multiplicand the result must be zero.

Your efficiency in life depends largely upon your physical and mental health and your habits of work, rest, and recreation. To conserve your inborn possibilities and to multiply your talents is not only a high privilege, but your greatest immediate duty. To fail is to be morally culpable; to succeed betokens true wisdom and virtue. No worthier object of contemplation can occupy your mind than the advice of Socrates, "Know thyself."

CLASS ACTIVITIES

Exercise

When you have carefully reread the division which you selected from Mr. Bolton's discussion, prepare a reading card recording a brief quotation and a paragraph of your own comment, like the following:

> III. Forming Habits Early. Bolton, F. E., *The Mind at Work,* pages 83-84.
> We should form habits early, so that the brain may be relieved later of mechanical work and be concerned with higher operations.
> It is interesting to note the contrast between classes which are just beginning and those which are just finishing stenography or typewriting in our Commercial Department. Practice exercises of the beginning pupils are very slow and painful processes; both their brains and their hands move awkwardly; each separate act must be consciously directed while the beginners are forming their habits. How different are the expert seniors! The symbols of stenography come tripping upon the page with no effort, fingers fly above the typewriter keys, while the minds of the workers are busy with the thoughts they are transcribing.

Have a class committee select, copy, and mount on a chart ten of the best notes. Post the chart on the bulletin board.

Problems for Class Discussion

Select your task and take fifteen minutes for preparation.

1. "The demands for variety frequently allure to new fields before assimilation has been effected." Is there an example in your school life of going after a new line of interest before you have mastered some line you had already undertaken?

2. Lord Salisbury, a Foreign Minister of England, once said of Lord Curzon, Viceroy of India, "We can always count on Curzon; he has a cool head, a strong hand, and a true heart." In what part of his article might Mr. Bolton most appropriately have made use of this illustration? Explain.

3. Who are the outstanding "thinkers" of the present day in one or in several lines of activity? Name only men and women who have

lived during the past ten years. For example, Dallas Lore Sharp in the field of Nature. See how many you can name in a class discussion. Use the blackboard. Plan a series of class reports to be given after reading and study on "Thinkers of Today."

4. How our school guards against participation in too many "outside activities." Justify this in the light of Bolton's argument.

5. The old saying, "Necessity is the mother of invention," has been parodied, "Laziness is the mother of invention." Give a concrete illustration of each of these sayings, showing the difference in meaning.

Individual Projects

1. "Most habits are controlled by the spinal cord." (Bolton, page 83.) Some member of the class who is expert in physiology may explain with diagrams how this is true. Let the student selected secure, if necessary, the coöperation of the science teacher best fitted to give the advice and guidance. Perhaps your science teacher would be willing to explain to this class the very vital principle of habit formation involved in the statement quoted.

2. Several interesting articles have recently appeared upon the general topic of "Outside Activities in High-school Life." If you are near a college library, you can read and report to the class one of the following:

(*a*) "Extra-Curricular Activities and Scholarship," P. P. Boyd, *School and Society,* Vol. 13, page 158.
(*b*) "Social Life of High School Girls," Olivia Pound, *The School Review,* Vol. 28, page 50.
(*c*) "Student Activities and Success in Life," L. Bevier, *Educational Review,* Vol. 58, page 1.
(*d*) "Point System for Extra-Curricular Activities," T. H. Vaughn, *School and Society,* Vol. 16, page 745.

3. Dean Le Baron R. Briggs of Harvard has a book *School, College and Character;* President William DeWitt Hyde of Bowdoin has one, *The College Man and the College Woman;* Dean F. C. Lockwood of the University of Arizona, one called *The Freshman and His College.* Be prepared to report some of the big ideas in the book you select.

4. Read an "Adventure of Sherlock Holmes" to see how the great detective developed habits of painstaking and minute observation. What facts does he notice in the story you select that would have escaped the untrained observer?

SECTION III

THE FORMATION OF GOOD HABITS[1]

WILLIAM JAMES

Reading suggestions

(1) This selection, written by one of the most distinguished American students of human nature, William James, is remarkable in many ways. You are asked to notice especially how easy he makes what is usually considered a difficult subject. He accomplishes this feat by the use of homely concrete illustrations with many of which the average reader is certain to be familiar.

(2) Outlined in Mr. James's selection are what are today considered the four laws of habit formation. James borrows the first two of these maxims from another writer and adds two others.

> *Maxim I.* In breaking old and forming new habits, take care to *launch yourself with as strong and decided an initiative as possible.*
>
> *Maxim II. Never suffer an exception to occur till the new habit is securely rooted in your life.*
>
> *Maxim III. Seize the very first opportunity to act on every resolution you make. . . .*
>
> *Maxim IV. Keep the faculty of effort alive in you by a little exercise every day.*

(3) It will at once occur to you that James is speaking primarily of moral habits. The question will naturally arise whether the maxims apply in the formation of habits other than those of morality. The answer is affirmative. Habits like correctness in punctuation, skill in taking notes, regularity of study hours, neatness of person, punctuality, politeness, and the like, are all subject to the laws of habit formation enumerated by James.

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[1]Reprinted by permission from *The Principles of Psychology*, Vol. I, Chapter IV. Copyright, Henry Holt and Company.

(4) You have been asked in the articles of this chapter to consider certain desirable and other undesirable habits in the life of a student. As you have come upon them, both good and bad, you have been thinking about your own needs in respect to each, solely from the viewpoint of efficiency and capability in workmanship. Read the article of James's to acquaint yourself with the laws of habit formation which anyone must apply if he is determined to move in the direction of breaking old and establishing new habits.

"Habit a second nature! Habit is ten times nature," the Duke of Wellington is said to have exclaimed; and the degree to which this is true no one can probably appreciate as well as one who is a veteran soldier himself. The daily drill and the years of discipline end by fashioning a man completely over again as to most of the possibilities of his conduct.

"There is a story," says Professor Huxley, "which is credible enough, though it may not be true, of a practical joker, who, seeing a discharged veteran carrying home his dinner, suddenly called out, 'Attention!' whereupon the man instantly brought his hands down, and lost his mutton and potatoes in the gutter. The drill had been thorough, and its effects had become embodied in the man's nervous structure."

Riderless cavalry horses, at many a battle, have been seen to come together and go through their customary evolutions at the sound of the bugle call. Most trained domestic animals, dogs and oxen, and omnibus and car-horses, seem to be machines almost pure and simple, undoubtingly, unhesitatingly, doing from minute to minute the duties they have been taught, and giving no sign that the possibility of an alternative ever suggests itself to their mind. Men grown old in prison have asked to be readmitted after being once set free. In a railroad accident to a traveling menagerie in the United States some time in 1884, a tiger, whose cage had been broken open, is said to have emerged, but presently crept back again, as if too much bewildered by his new responsibilities, so that he was without difficulty secured.

Habit is thus the enormous fly-wheel of society, its most pre-

cious conservative agent. It alone is what keeps us all within the bounds of ordinance,[1] and saves the children of fortune from the envious uprisings of the poor. It alone prevents the hardest and most repulsive walks of life from being deserted by those brought up to tread therein. It keeps the fisherman and the deckhand at sea through the winter; it holds the miner in his darkness, and nails the countryman to his log-cabin and his lonely farm through all the months of snow; it protects us from invasion by the natives of the desert and the frozen zone. It dooms us all to fight out the battle of life upon the lines of our nurture or our early choice, and to make the best of a pursuit that disagrees, because there is no other for which we are fitted, and it is too late to begin again. It keeps different social strata from mixing. Already at the age of twenty-five you see the professional mannerism settling down on the young commercial traveler, on the young doctor, on the young minister, on the young counselor-at-law. You see the little lines of cleavage running through the character, the tricks of thought, the prejudices, the ways of the "shop," in a word, from which the man can by and by no more escape than his coat sleeve can suddenly fall into a new set of folds. On the whole, it is best he should not escape. It is well for the world that in most of us, by the age of thirty, the character has set like plaster, and will never soften again.

If the period between twenty and thirty is the critical one in the formation of intellectual and professional habits, the period below twenty is more important still for the fixing of *personal* habits, properly so called, such as vocalization and pronunciation, gesture, motion, and address. Hardly ever is a language learned after twenty spoken without a foreign accent; hardly ever can a youth transferred to the society of his betters unlearn the nasality and other vices of speech bred in him by the associations of his growing years. Hardly ever indeed, no matter how much money there may be in his pocket, can he even learn to *dress*

[1] *Ordinance*, law.

like a gentleman born. The merchants offer their wares as eagerly to him as to the veriest "swell," but he simply *cannot* buy the right things. An invisible law, as strong as gravitation, keeps him within his orbit, arrayed this year as he was the last; and how his better-bred acquaintances contrive to get the things they wear will be for him a mystery till his dying day. . . .

The great thing, then, in all education, is to *make our nervous system our ally instead of our enemy.* It is to fund and capitalize our acquisitions, and live at ease upon the interest of the fund. *For this we must make automatic and habitual, as early as possible, as many useful actions as we can,* and guard against the growing into ways that are likely to be disadvantageous to us, as we should guard against the plague. The more of the details of our daily life we can hand over to the effortless custody of automatism, the more our higher powers of mind will be set free for their own proper work. There is no more miserable human being than one in whom nothing is habitual but indecision, and for whom the time of rising and going to bed every day, and the beginning of every bit of work, are subjects of express thoughts and acts of will, volitional deliberation.[1] Full half the time of such a man goes to the deciding, or regretting, of matters which ought to be so ingrained in him as practically not to exist for his consciousness at all. If there be such daily duties not yet ingrained in any one of my readers, let him begin this very hour to set the matter right.

In Professor Bain's chapter on "The Moral Habits" there are some admirable practical remarks laid down. Two great maxims emerge from his treatment. The first is that in the acquisition of a new habit, or the leaving off of an old one, we must take care to *launch ourselves with as strong and decided an initiative as possible.* Accumulate all the possible circumstances which shall reënforce the right motives; put yourself assiduously[2] in conditions that encourage the new way; make engagements in-

[1] *Subjects of express . . . volitional deliberation,* subjects of careful thought and of acts of the will.

[2] *Assiduously,* persistently.

compatible with the old; take a public pledge, if the case allows; in short, envelop your resolution with every aid you know. This will give your new beginning such a momentum that the temptation to break down will not occur as soon as it otherwise might; and every day during which a breakdown is postponed adds to the chances of its not occurring at all.

The second maxim is: *Never suffer an exception to occur till the new habit is securely rooted in your life.* Each lapse is like the letting fall of a ball of string which one is carefully winding up; a single slip undoes more than a great many turns will wind again. *Continuity* of training is the great means of making the nervous system act infallibly right. . . .

The need of securing success at the *outset* is imperative. Failure at first is apt to dampen the energy of all future attempts, whereas past experience of success nerves one to future vigor. Goethe said to a man who consulted him about an enterprise but mistrusted his own powers: "Ach! you need only blow on your hands!"[1] And the remark illustrates the effect on Goethe's spirits of his own habitually successful career. Professor Baumann, from whom I borrow the anecdote, says that the collapse of barbarian nations when Europeans come among them is due to their despair of ever succeeding, as the newcomers do, in the larger tasks of life. Old ways are broken and new ways not formed. . . .

A third maxim may be added to the preceding pair: *Seize the very first possible opportunity to act on every resolution you make and on every emotional prompting you may experience in the direction of the habits you aspire to gain.* It is not in the moment of their forming, but in the moment of their producing *motor effects,*[2] that resolves and aspirations communicate the new "set" to the brain.

No matter how full a reservoir of *maxims* one may possess, and

[1]This means, in our common expression: "Take your courage in your own hands and go ahead."

[2]*Motor Effects.* When one's new resolution is turned into appropriate action, then comes the new "set" to the brain. One's handwriting improves, not when he resolves to make it better, but when he actually writes a better hand. The resolution tends to be "set" in the brain, the habit tends to be formed by the appropriate action.

no matter how good one's *sentiments* may be, if one have not taken advantage of every concrete opportunity to *act,* one's character may remain entirely unaffected for the better. With mere good intentions hell is proverbially paved. . . . A tendency to act only becomes effectively ingrained in us in proportion to the uninterrupted frequency with which the actions actually occur, and the brain "grows" to their use. Every time a resolve or a fine glow of feeling evaporates without bearing practical fruit is worse than a chance lost; it works so as positively to hinder future resolutions and emotions from taking the normal path of discharge.

There is no more contemptible type of human character than that of the nerveless . . . dreamer, who spends his life in a weltering sea of emotion, but who never does a manly concrete deed. Rousseau,[1] inflaming all the mothers of France, by his eloquence, to follow Nature and nurse their babies themselves, while he sends his own children to the foundling hospital, is the classical example of what I mean. . . . The weeping of a Russian lady over the fictitious personages in the play, while her coachman is freezing to death on his seat outside, is the sort of thing that everywhere happens on a less glaring scale. Even the habit of excessive indulgence in music, for those who are neither performers themselves nor musically gifted enough to take it in a purely intellectual way, has probably a relaxing effect upon the character. One becomes filled with emotions which habitually pass without prompting to any deed, and so the inertly sentimental condition is kept up. The remedy would be never to suffer oneself to have an emotion at a concert without expressing it afterward in *some* active way. Let the expression be the least thing in the world—speaking genially to one's aunt, or giving up one's seat in a horse car, if nothing more heroic offers—but let it not fail to take place. . . .

As a final practical maxim, relative to these habits of the will,

[1] *Rousseau:* a brilliant and eccentric Frenchman who, in the case cited, emotionally urged other parents to do that which was entirely contrary to the practice of his own family.

we may, then, offer something like this: *Keep the faculty of effort alive in you by a little exercise every day.* That is, be systematically heroic in little unnecessary points; do every day or two something for no other reason than that you would rather not do it, so that when the hour of dire need draws nigh, it may find you not unnerved and untrained to stand the test. Asceticism[1] of this sort is like the insurance which a man pays on his house and goods. The tax does him no good at the time, and possibly may never bring him a return. But if the fire *does* come, his having paid it will be his salvation from ruin. So with the man who has daily inured himself to habits of concentrated attention, . . . and self-denial in unnecessary things. He will stand like a tower when everything rocks around him, and when his softer fellow-mortals are winnowed like chaff in the blast. . . .

Could the young but realize how soon they will become mere walking bundles of habits, they would give more heed to their conduct while in the plastic state. We are spinning our own fates, good or evil, and never to be undone. Every smallest stroke of virtue or of vice leaves its never so little scar. The drunken Rip Van Winkle, in Jefferson's play, excuses himself for every fresh dereliction by saying, "I won't count this time!" Well! he may not count it, and a kind Heaven may not count it; but it is being counted none the less. Down among his nerve-cells and fibers the molecules are counting it, registering and storing it up to be used against him when the next temptation comes. Nothing we ever do is, in strict scientific literalness, wiped out.

Of course, this has its good side as well as its bad one. As we become permanent drunkards by so many separate drinks, so we become saints in the moral, and authorities and experts in the practical and scientific spheres, by so many separate acts and hours of work. Let no youth have any anxiety about the upshot of his education, whatever the line of it may be. If he keep faithfully busy each hour of the working day, he may safely leave

[1] *Asceticism:* practicing extreme rigor, or exceeding care.

the final result to itself. He can with perfect certainty count on waking up some fine morning, to find himself one of the competent ones of his generation, in whatever pursuit he may have singled out. Silently, between all the details of his business, the *power of judging* in all that class of matter will have built itself up within him as a possession that will never pass away. Young people should know this truth in advance. The ignorance of it has probably engendered more discouragement and faint-heartedness in youths embarking on arduous careers than all other causes put together.

CLASS ACTIVITIES

Exercises

1. Relate instances of habitual action similar to the acts of domestic animals and of men in prison, as told by James.

2. Select ten of the most valuable concrete illustrations used by James. Discuss the value of such illustrations in making thought clear.

3. Not all of the effects of habit as described by James in the fourth paragraph are beneficial. Make two lists from his illustrations; in one, place beneficial effects; in the other, the effects of the opposite kind.

4. Habits of a certain order, like slow, painful reading of every word, may be beneficial in some situations and harmful in others. Similarly a reading habit of "skipping," useful in certain reading problems, may be very harmful in others. Even a habit of persistent cheerfulness may sometimes be out of place. Unvarying sadness is extremely distressing. Certainly the facial habit of sourness or gloom, never changing, is always very irritating. An illuminating discussion might arise in your group upon the topics:

(*a*) Good habits at the wrong time and place.

(*b*) Is there a super-habit of sensibly adapting and modifying regular habits to varying emergencies? For example, the habit of never speaking critically of others; ought this habit ever to have exceptions?

5. Whenever you apply to your own acquaintances the point James makes about habits of dress and appearance on page 95, you must use

the greatest tact. In all probability you can furnish plenty of evidence to support Mr. James's point. Recall, however, that habits are on various levels. One who is slovenly in dress may be habitually charitable; one whose English is habitually faulty may be master of worthy ideas. Often superficial habits outweigh, in our minds, the really substantial habits upon which merit must ultimately be judged. A class discussion on the issues raised in this paragraph might be profitable.

6. It would be interesting to examine a play like Drinkwater's *Lincoln* to discover whether he has portrayed accurately the habits of American pioneer life.

7. At the close of his article James speaks of *the power of judging* in one's chosen field of work as the supreme mark of efficiency. Explain how his point is in keeping with the theme of this book, that reading, thinking, and studying are closely related processes.

8. For habits of the older days that are now out of fashion, someone might read Hamlin Garland's *A Son of the Middle Border,* or his *A Daughter of the Middle Border,* accounts of life on the prairies of the Middle West, about the time your grandparents were children. What old-fashioned habits are described?

9. What lies back of James's recommendation that you "do every day or two something for no other reason than that you would rather not do it"?

10. How might an athlete "make an enemy of his nervous system"? A draftsman? A high-school student?

11. Appoint a committee to draw up a form for a daily or weekly work-schedule for members of your class. When the form is ready, let each one fill it out for himself. Volunteers may try following their schedules accurately for two weeks and report results.

Projects

A. Classify under four main divisions the following suggestions concerning study: I. Physical conditions of the study-room and of the student; II. Mental attitude toward study; III. The actual study process; IV. Supplementary suggestions. Add other sub-headings that may occur to you. Consult books in Additional Reading Projects, pages 105-6. Under each main topic arrange the sub-heads in the order of increasing importance. Compare results by giving all your papers to a committee who may make one composite outline.

1. Keep yourself in good physical trim; take proper exercise; eat moderately.
2. Remedy physical disabilities, such as bad eyesight.
3. Secure plenty of sleep in a well-ventilated room.
4. Be thoroughly prepared each day.
5. Be regular in your work; make your daily preparation at the same hour and place; form "time" and "place" habits.
6. Assume the attitude of attention.
7. Begin work at once; get started promptly and resolutely.
8. Concentrate; disregard distractions; put "steam" into your work.
9. Don't let application become worry; be calm and poised.
10. Work rapidly, but be accurate.
11. Seek motives and purposes; work for a definite result.
12. Have a firm resolve to remember; be eager to learn.
13. Do not ask for help until it is positively necessary.
14. Pause at times to think about what you are studying.
15. Occasionally relax all physical tension, giving yourself a short period of rest.
16. Apply your knowledge as often as possible.
17. Work out concrete examples of rules and principles.
18. Review often; especially critical parts.
19. State important thoughts in your own words.
20. Study long enough at a time to "warm up"; but don't become fatigued.
21. When possible, study a lesson immediately after the assignment.
22. Begin with a rapid preliminary survey.
23. Be sure that the light comes over the left shoulder; be comfortable, but not too comfortable.
24. Be sure that you understand an assignment before you begin.
25. Definitely formulate in your own words the aim of the assignment.
26. Take time to connect or associate new material with information you already possess.
27. Test your preparation by making an outline or a brief summary.
28. Feel intensely the urge to do the task before you.
29. Get "set" for your study.
30. Keep the mind from wandering; concentrate on the job.
31. "Budget" your study time; have a relatively fixed program.

B. Imagine the audience of freshmen in Yale University listening to the paragraphs which follow. Dean Charles R. Brown, who is speaking, wants the boys to see for themselves, without being told in so many words, the value of forming certain habits. What habits did the boys evaluate as they heard these statements?

THE NAME YOU BROUGHT[1]

Let me speak to you then this morning about names. In the first place, the name you brought with you has no particular significance. You inherited your surname from your father and grandfather. They may have borne it with honor and distinction. Even so, the light it shows when it comes to you is only a reflected light like that of the moon. Your Christian name, your "given name," was bestowed upon you by the choice of your parents. It may not be at all to your liking. Many a fellow has been called Clarence or Percival who would much rather have been known as Jack or Sam. Let that be as it may—we have to take the hands which are dealt to us in this matter—the name you brought with you is like a sheet of paper on which you are privileged to write almost anything you like. It is "up to you," as we say in our well-worn phrase, to give that name meaning.

Forty-eight years ago a Freshman walked in here who gave his name as William Howard Taft. The name was not known then all around the world. It was merely a name given to him by a good family in Cincinnati, but not one in a hundred of his fellow students had ever heard of it before. He began right off to clothe that name with meaning. He was clean and straightforward in his mode of life. He was genial and likable—he made friends right and left. He was thorough and accurate in his scholarship, a Phi Beta Kappa man when the time came. He was faithful in meeting the larger obligations of college life, showing even then a keen interest in the privileges and responsibilities which go with public service. He graduated with honors forty-four years ago. How much it means today when this question is addressed to him, "Tell me, I pray thee, thy name," that he can answer back, "William Howard Taft." Millions of people in all the lands of earth hold that name—the name of the Chief Justice of the Supreme Court of the United States—in high esteem. And he made it so.

Let me come down to more recent times! Some men may feel that anything which happened forty-eight years ago is ancient history, almost as remote as the Battle of Marathon. I am sure there was a time when I thought so.

Four years ago another Freshman walked in. He had not come from an expensive, exclusive preparatory school—he came from a high school in a commonplace manufacturing town in Massachusetts. He was a

[1]Reprinted by permission of Charles R. Brown.

quiet, modest sort of fellow with none of the advantages which go with wealth and social position. He gave his name as Malcolm Aldrich, and he made that name a name to conjure with. His qualities of body, brain, and heart caused it to stand out. He became captain of the football team and captain of the baseball team because, without putting on any airs about it, he seemed to be able to play the game better than anybody else. He was a good student, and when he graduated he took honors. He was a high-minded Christian gentleman, and when the Seniors came to elect the six class deacons of the College Church a year ago, Aldrich was chosen. It did our souls good just to see him walking up and down the aisles of Battell Chapel with the bread and the wine of the Sacrament. He can go anywhere today among these eastern colleges and when anyone asks him, "What is thy name?" his answer carries meaning.

Topics for Oral or Written Work

1. Two of my reading habits; one good, one bad.
2. Regularity in study periods.
3. A diagram of my daily study schedule.
4. Habits, good and bad, observable in our study hall.
5. How to avoid distractions.
6. My interview with —— on his reading habits.
7. A scientific explanation of how sleep rebuilds the body.
8. What is the physiological explanation of fatigue?
9. Beginning a social habit like lifting one's hat.
10. Can one acquire deliberately a habit of gesturing in speech?
11. The habit of gesturing in conversation.
12. The habit of verifying a doubtful statement.
13. One who talks "from the spinal cord."
14. Amusing habits in our town.
15. Echoing another's ideas!
16. When good reading-cards helped me out.
17. A reference I sought for long and found.
18. A useful action that is habitual with me.
19. What Miss Tarbell tells of Lincoln's memory.
20. How to handle a book: opening it, marking a place, keeping it clean.
21. The physical make-up of a book: sections, hinges, fly leaves, bindings. Take an old book to pieces before the class.

22. Printed parts of a book: title page, copyright date, preface, contents, body, index, appendix.
23. Other elements of a book: illustrations, introductions, glossary, dedication, cover design, notes, footnotes.
24. New Year's resolutions: How they embody James's first maxim (page 96). Why they usually fail (the other maxims).
25. How I take notes.
26. "Ideas that are echoes" vs. ideas that are one's own.
27. Skimming vs. mastering in study.
28. The disadvantages of studying in groups.
29. Studying "for keeps."
30. Habits of neatness in our school (*or* our city).

ADDITIONAL READING PROJECTS

1. "Textbooks and Books of Reference," John Adams, ***Making the Most of One's Mind,*** Chap. VII. Special discussion of the use of the dictionary and encyclopedias, pages 189 ff.
2. *Books as Tools,* Z. L. Shields, Omaha Public Library Publication. On the use of the high-school library.
3. "Listening and Note-Making," John Adams, ***Making the Most of One's Mind,*** Chap. VIII. Advice about making records for use.
4. "The Use of Note-Books," C. F. Richardson, *The Choice of Books,* page 82. The difference between "hearing" and "listening." How to make records.
5. "Observation and the Taking of Notes," G. V. N. Dearborn, *How to Learn Easily,* Chap. II. The last half of the chapter is especially helpful about the taking of notes.
6. "Examination Preparedness," G. V. N. Dearborn, *How to Learn Easily,* Chap. VI. How to get ready for examinations.
7. *Note-Taking,* S. S. Seward, Jr. Every English class and history class should study this, the best in its field: how to condense notes, how to organize notes, special problems in note-taking.
8. "Fixed Hours of Study," R. L. Sandwick, *How to Study,* Chap. III, page 20. Stresses sleep, regular hours, study programs, promptness in beginning.
9. "Controlling the Mind," Arnold Bennett, *How to Live on Twenty-four Hours a Day,* Chap. VIII. Shows the value of concentration upon the task in hand.
10. "Preparation for an Effective Life," C. W. Eliot, *The Training for an Effective Life,* Chap. IV. Compare with the advice given by Bolton, page 80. Especially note the passages about reading, thinking, and reflecting.

11. "What Is Efficiency?" R. L. Sandwick, *How to Study,* Chap. XII, page 152. Special emphasis on initiative as the basis of efficiency. What is mental power? What is social power?
12. *Letters from a Father to His Son Entering College,* C. F. Thwing. Discussion of valuable habits in school life.
13. "The Finished Product," F. P. Keppel, *The Undergraduate and His College,* Chap. IX. Portrays the failures and successes of school life.
14. "Plan of Campaign," John Adams, *Making the Most of One's Mind,* Chap. II. Suggestions for making the best use of one's time and strength in school duties.
15. "Note-Taking," H. D. Kitson, *How to Use Your Mind,* Chap. II. Maintaining mental activity in taking notes; reading with questions in mind.
16. "Formation of Study-habits," H. D. Kitson, *How to Use Your Mind,* Chap. IV. How to insure useful mental habits.
17. "Literature Can Give You the Mastery of Your Own Language," C. Alphonso Smith, *What Can Literature Do for Me?* Chap. VI. How the eleven types of literature help one to acquire discipline in language habits. Gives valuable advice about the relation between the study of the details of a piece of literature and the study of the masterpiece as a whole.
18. *Notes and Outlines,* A. T. Robinson. A brief pamphlet of 47 pages which explains and exemplifies the best practices for students to use in keeping records of their reading.
19. "The Psychology of Work," E. B. Bryan, *The Basis of Practical Teaching,* Chap. VI. We learn by doing; there is no substitute for work.
20. "Habit," E. B. Bryan, *The Basis of Practical Teaching,* Chap. V. Habits may be our allies or our enemies; they are equally powerful whichever way they pull.
21. "Principles of Habit Formation," A. S. Edwards, *Fundamental Principles of Learning and Study,* Chap. IV, pages 54-61. How habits are formed; hindrances to habit formation; breaking old habits.
22. "Proper Habits and Methods of Work," G. F. Swain, *How to Study,* Chap. V, pages 54-65. Fourteen principles of effective study clearly explained.

CHAPTER THREE

Thinking and Learning to Think

Thinking remains just what it has been all the time: a matter of following up and testing the conclusions suggested by the facts and events of life. —John Dewey

SECTION I

PRACTICAL POINTS ABOUT LEARNING TO THINK[1]

G. V. N. Dearborn

Reading Suggestions

The article in this section constantly presents challenges. Again and again it throws the reader into a state of critical self-examination. In a very kindly way the writer, Mr. Dearborn, places squarely before average men and women the faults of their own mental life. None of us can come away from a thoughtful reading of it without feeling humble.

(1) Read first the opening and the closing paragraphs.

(2) Read through the article very slowly, answering the problems printed in italics which follow the paragraphs to which they refer. Answer each problem in writing before you go further with the reading.

Every one of you has some kind of a thinker, for probably no feeble-minded person is reading this advice, and certainly no idiot; these have no thinkers. In some cases thinkers are small, and not now of much use. These are the thinkers of the relatively stupid people. But they may be developed if there is will to develop them. In some cases thinkers are well developed, but rusty and dried out; these need a thorough cleaning and oiling and use. These are the lazy students. In some cases the thinkers have parts which are likely to break

[1]Adapted by permission from *How to Learn Easily*, copyright, Little, Brown and Company.

down at any moment. These are the illogical minds and the guessers. In some cases thinkers are normal, but have the uncertain and difficult action of newness; they are not used nearly enough to make them run smoothly; they should be oiled with intelligence and energy. These are the average minds. Unused thinkers, like all other organs, tend to atrophy, and hardening through disuse is the result of inadequate action. On the other hand it is as delightful as it is useful to take systematic mental exercise, and so to become an intellectual athlete. But how few can be made to realize this! The process of mental exercise as well as its product, is a continual delight, and is the most essential process in the mind's action.

PROBLEM. *In which class is your thinker?*

The factors of education are more numerous than many suppose, each one requiring thought and teaching thought: the home, the schools, books, one's associates, one's vocation, the stage, travel, the state, the church—learning is a process of reaction to these nine. Each of the nine factors contributes material for learning which is valuable more or less in proportion to the thoughtfulness with which it is allowed to act on the learning mind. Learning, a process of activity of personality, develops in quality and quantity in proportion to the individual's fitness and to the richness of his environment. In fact, thought is this reaction to one's environment or part of it. This is an active receptivity; it is like the heat coming from a fire arising from oxygen and fuel—it is inevitable. Thought stands for INITIATIVE based on understanding and originality.

PROBLEM. *Name one factor of school life which has recently required thinking on your part, and explain what you thought.*

William James has a famous passage, "Stop, look, and listen" to your own minds. He refers to one of the secrets of learning to think, one which women have known instinctively all along. Set your thinker going by deliberate, fixed, permanent intention, and then *listen!* Encourage it now and then by actively giving it full opportunity. Stop, in part, the stuffing of your

mind, and thus give it every possible opportunity to work. One feeds a furnace with coal to get heat from it, but some individuals are forever putting facts into the minds but never providing time to use them in thought.

PROBLEM. *Name and discuss a school activity which may be likened to "stuffing" as contrasted with thinking.*

The nature of thought should receive brief attention. Thought is not reverie, musing, fancy, daydreaming; although most so-called thought is just this, a loose associated train of ideas or notions or fancies. True thought is intimately of the nature of human reason; it is more precious, more productive—"sterner stuff"—than a more or less passive reverie, for it involves the expenditure of force.

PROBLEM. *Give an example of daydreaming when you should have been thinking.*

The most important element of thought is reasoning, which in principle is extremely simple. Reasoning is a comparison of things followed by an inference from the comparison. For example, compare study A which is easy for you with study B which is more difficult. You will find some one or more essential differences; then by drawing an inference, or reasoning, you conclude that these differences are the causes of the difficulty. This is thinking. It is what Lloyd Morgan has spoken of as "Thinking the therefore." Thought, then, consists of two judgments: *comparison* and *inference.*

PROBLEM. *What studies may you compare? What is the inference you draw from the comparison?*

This is the essence of thought, and the most productive because it alone produces something new. Ingenuity, originality, invention, and discovery often rest wholly on processes of inferring through comparisons. Six practical points about learning to think may be discussed briefly:

First. The realization of the necessity of thought and the delight of thought. The average young man or woman has no way of learning that what most counts is thought, initiative,

active imagination. Experience alone will prove this to him. Experience shows overwhelmingly that constructive thinking chiefly makes the difference between a life of wages and a life of salary. Everyone has more or less information, but only a few use it in thought, and so do things that are new, or do old things in new ways, the next best accomplishment.

> PROBLEM. *What is the value of "originals" in mathematics? Why is the very problem on which you are now working an "original"?*

Second. Development of interests. The absolute necessity of interest for learning is frequently pointed out. The necessity is still surer for thought, true wisdom, real education. Develop interest in a subject, and your mind will think it out by association, by imagination, if given a chance, while you are doing something else. Such developed interests furnish the motive power for thinking.

> PROBLEM. *What are your own outstanding interests which determine how you think?*

Third. An abundance of clear ideas. Especially important are ideas of relationship. The relation to language is immediate here. Harvard College has recently made an extensive investigation tending to determine the relationship of the study of English along the line of intimate connection with our native intelligence. Ideas of relationship are especially essential; by their very nature they tend to develop comparisons and contrasts; and their elaboration should be a systematic part of all schoolwork. The habit of the use of dictionaries of synonyms and antonyms is easily acquired; there is an amazing interest in the relations of verbs, nouns, adjectives, and adverbs—their qualities, what they do, and how. Books of synonyms and antonyms are valuable when the habit of using them has been acquired. Their use does much to develop thought as well as clearness of expression and literary style; they help the mind to work logically and systematically.

PROBLEM. *How does the statement that ideas of relationship are especially essential fall in line with the statement that thinking is essentially comparison and inference?*

Purely for emphasis it is worth repeating that words make up language and serve to connect it with the brain, and thereby with the remainder of the body and the rest of the world. Words are the quite indispensable handles of our human thinking, of our humanity itself. The closeness of this relation between language and thinking is worth strong emphasis, for its general educative importance is supreme.

PROBLEM. *Can you tell about one instance in which you experienced the satisfaction of exactly the right new word?*

Fourth. The habit of concentrated attention. This concentration should be for short periods along lines not disagreeable to the ability to think. Concentration sinks ideas more deeply into the brain; how, we know not. Conscious attention, however exactly it may act, as that in discoveries and inventions, can be concentrated properly for only short periods. Ideas stick best when they are impressed in periods of only thirty minutes, two or three times a day. We may use this as a rule for thinking; it means the importance of keeping the brain always rested. It is far more important than the saving of mere time. Muscles, especially the larger ones, may be fatigued without nervous harm (in fact this makes for sound sleep), but never the nerves. In the human brain there are nine thousand million nerve-units, which together weigh only a few grams; from this immense number may be seen how minute and subtly delicate they are; so do not fail to appreciate their liability to fatigue. Brain fatigue is a very real matter. At the same time the brain may be trained; one need not coddle it. Most people coddle their brains!

PROBLEM. *Prove that you are resolutely concentrating at this very moment upon this lesson, by writing from memory Dearborn's first, second, and third points about learning to think.*

Fifth. Habituation to the thinking process. Habit makes

thinking much easier than at first it appears to be, makes thinking a continuous subconscious process. In order to acquire the thinking habit, other habits may have to be bent or sometimes even broken. (*a*) The general principle is that in proportion to the stability of the nervous system of the individual, according to age, sex, or vigor, habit may be suddenly bent down out of existence. (*b*) A second process of displacing a habit is keeping normally busy in everyday activity. And a third (*c*) is replacement of the undesirable habit with some other more useful habit. In general, students who are apt to read this article can break short off whatever habits conflict with the thinking or the study habit.

PROBLEM. *What one major habit ought you to break in order to study better?*

Sixth. Opportunity for thought, in time and in solitude. Many of us are "too busy" with far less productive activities, really to live or really to think. We should make time, make solitude for thought. People are often too much continuously together. Each individual is separate, and requires individual separate thought. In general, one should in some way manage to spend considerable time alone. The gentle exercise of a stroll or of a slow bicycle ride requiring little attention to itself is an ideal occasion for thinking—unless the attention wanders too much outwardly. Schools are oftentimes too crowded to allow their students to think. One can afford as a matter of dollars and cents to take an extra year in school, if by doing so he can learn to think; the time so used is a rich and certain investment. In default of better time, a half-hour after waking and before rising is a good time to think, and many people have their most productive and original thoughts occur to them thus in the early morning after a good night's rest.

PROBLEM. *When is your best time for studying? Your poorest?*

This advice to make thought-time at any cost is well-considered advice, not an idle notion. It is wholly practical and

expedient. It is, in fact, very often a matter of dollars and cents, and of advancement, not one only of developing one's soul and personality, which much of the world has not yet learned to value.

Rules for thinking are wholly unnecessary even to a young student. The normal human mind always knows how to think as part of its normality. Possibly no other animal knows how, but man knows how, and so do all normal boys and girls. The only explicit rule for thinking is: *Acquire the habit.* In plain language, laziness more than anything else prevents this habit of thought, for with all the interest and delight there is in learning to think, it is not always easy to become a thinker in this unresting world which never stops its hurry. Some really do not know how to think only because they have never tried to learn. The vast majority are simply too indolent to put their thinkers in order and to use them. And this is so, notwithstanding the fact that constructive mental action is a great delight as well as by far the most practically productive process of the mind.

A few of my readers may here be "thinking" in annoyance, "I do not read this article to be accused of laziness." No, indeed, you do not, but some of you—perhaps you yourself—need to understand better how to learn easily; and for this purpose, one of the essential lessons to be learned is the utter incompatibility of learning and indolence. Were it otherwise, learning would be of relatively little financial use, for every common millionaire would be a thinker, and every tramp a millionaire.

CLASS ACTIVITIES

Class Work

1. Read aloud various answers to the problems in italics.

2. In his second paragraph Dearborn says that "learning is the process of reaction" to nine factors. Name some "material for learning" associated with each of the nine factors.

i. Home: prompt obedience; orderliness; doing one's full share.

ii. Schools	vi. Stage .....
iii. Books	vii. Travel .....
iv. Associates	viii. State .....
v. Vocation	ix. Church .....

Experiments in Studying and Thinking

Every member of the class should try one of the first four; appoint a date for reports about two weeks later.

1. Make an experiment: Put a solid half-hour of concentrated work on your hardest study, each morning before school. Try it faithfully for two weeks, and observe results.

2. Try this as an alternative: Concentrate in your home-work upon your most difficult subject for exactly one hour at night before retiring. Allow fifteen minutes' relaxation before going to bed.

While at work keep this resolution in mind:

"Tomorrow morning I will say over the most important parts of that lesson." Then (here is the hard part) set your alarm clock fifteen minutes before you usually get up. Wake up resolutely and while you are dressing go over aloud the parts of your lesson which you determined to review. Try this for two weeks, and observe results.

3. You might experiment with this: For two weeks use every minute of your study periods in school. Do not waste a second. Then, either before dinner or after, as most convenient, take a walk alone, where you will meet no one you know, and talk over with yourself the important information and the meaning of the lessons studied in school.

4. Have you a regular task at home, like washing dishes, or making beds, or tending fires? For two weeks while you are doing this task use the time in thinking over the work of one of your school study periods. First, ask questions of yourself, and answer them aloud. Second, tie up the lesson with ones that have preceded. Third, think of practical applications you might make. Fourth, try to state in exact words any difficulties you encounter. Fifth, phrase questions about the lesson as you would ask them if tomorrow you were to take the place of the teacher. Sixth, plan how as the teacher you might otherwise use the class hour to serve your group most efficiently.

5. Plan a series of experiments with the length of your own study periods. Find the length of period of concentrated attention which seems to give you the best results.

SECTION II

HOW WE REASON[1]

HARRY D. KITSON

Reading Direction

To test your comprehension, after you have finished a second careful reading of the following article, fill in the outline below, referring to the book as little as possible. Write a complete sentence for each heading.

HOW WE REASON

I.	II. .....
A.	A. .....
B.	B. .....
C.	C. .....

When we examine the mental processes by which we think constructively, or, in other words, reason, we find first of all that there is recognition of a problem to be solved. When we start to reason, we do so because we find ourselves in a situation from which we must extricate ourselves. The situation may be physical, as when our automobile stops suddenly on a country road; or it may be mental, as when we are deciding what college to attend. In both cases, we recognize that we are facing a problem which must be solved.

After recognition of the problem, our next step is to start vigorous efforts to solve it. In doing this, we cast about for means; we summon all the powers at our disposal. In the case of the automobile, we call to mind other accidents and the causes of them; we remember that once the spark-plug played

[1]Reprinted by permission from Harry D. Kitson's *How to Use Your Mind*, 1921 Edition, Chapter IX. Copyright, J. B. Lippincott Company.

out, so we test this hypothesis. At another time some dust got into the carburetor, so we test this. Thus we go on, calling up possible causes and applying appropriate remedies until the right one is found and the engine is started.

In bringing to bear upon the problem facts from our past experience, we form a series of judgments. In the case of the problem as to what college to attend, we might form these judgments: this college is nearer home; that one has a celebrated faculty; this one has good laboratories; that one is my father's *Alma Mater*. So we might go on, bringing up all the facts regarding the problem and fitting each one mentally to see how it works.

Note that this utilization of ideas should not consist merely of fumbling about in a vague hope of hitting upon some solution. It must be a systematic search, guided by carefully chosen ideas. For example, if the clock on the mantelpiece has stopped, and having no idea how to make it go again, we mildly shake it in the hope that something will happen to set it going, we are merely fumbling. But if, on moving the clock gently, we hear the pendulum wobbling about irregularly, and at the same time observe that there is no ticking of any kind, and come to the conclusion that the pendulum has somehow or other escaped the little catch that connects it with the mechanism, we have been really thinking. From the fact that the pendulum wobbles irregularly, we infer that it has lost its proper catch. From the fact that there is no ticking, we infer the same thing, for even when there is something wrong with the clock that will prevent it from going permanently, if the pendulum is set in motion by force from without, it will tick for a few seconds before it comes to rest again. The important point to observe is that there must be inference. This is always indicated by the word *therefore* or its equivalent. If you reach a conclusion without having to use or at any rate to imply a *therefore,* you may take it for granted that you have not been really thinking, but only jumping to conclusions.

This process of putting facts in the form of judgments and

drawing inferences may be likened to a court-room scene where arguments are presented to the judge. As each bit of evidence is submitted, it is subjected to the test of its applicability to the situation or to similar situations in the past. It is rigidly examined, and nothing is accepted as a candidate for the solution until it is found by trial (of course, in imagination) to be pertinent to the situation.

The third stage of the reasoning process comes when some plan which has been suggested as a possible solution of the difficulty proves effective, and we make the decision; the arguments support or overthrow each other, adding to and eliminating various considerations until finally only one course appears possible. As we said before, the solution comes inevitably, as represented by the word *therefore.* Little active work on our part is necessary, for if we have gone through these other phases properly, the decision will make itself. You cannot make a wrong decision if you have the facts before you and have given each the proper weight. When the solution comes it is recognized as right, for it comes tinged with a feeling that we call belief.

Now that we have found the reasoning process to be one of problem-solving, of which the first step is to acknowledge and recognize the difficulty, the second, to call up various methods of solution, and the third, to decide on the basis of one of the solutions that comes tinged with certainty, we are ready to apply this scheme to study in the hope that we may discover the causes and remedies for the reasoning difficulties of students.

In view of the fact that reasoning starts out with a problem, you see at once that to make your study effective you must study in problems. Avoid an habitual attitude of mere acquisition.[1] Do not memorize facts in the same pattern as they are

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[1] "A reading machine, always wound up and going,
He mastered whatever was not worth the knowing;
'Twould be endless to tell you the things that he knew,
All separate facts, undeniably true,
But with him or each other they'd nothing to do,
No power of combining, arranging, discerning,
Digested the masses he learned into learning."
LOWELL, *A Fable for Critics.*

handed out to you. In history, in general literature, in science, do not read facts merely as they come in the text, but seek the relations between them. Voluntarily set before yourself intellectual problems. Ask yourself, *why* is this so? In other words, in your study do not merely acquire, but also *construct*. Acquisition makes use mostly of memory and though your memorizing be done ever so conscientiously, if it comprise the main part of your study, you fail to utilize your mind to its fullest extent.

Let us now consider the second stage of the reasoning process as found in study. At this stage the facts in the mind are brought forward for the purpose of being fitted into the present situation, and the essential thing is that you have a large number of facts at your disposal. If you are going to reason effectively about problems in history, mathematics, geography, it is absolutely indispensable that you know many facts about the subjects. One reason why you experience difficulty in reasoning about certain subjects is that you do not know enough about them.

The results of such ignorance are often demonstrated in political and social movements. Why do the masses so easily fall victims to doubtful reforms in national and municipal policies? Because they do not know enough about these matters to reason intelligently. Watch ignorant people listening to a demagogue and see what unreasonable things they accept. The speaker propounds a question and then proceeds to answer it in his own way. He makes it appear plausible, assuring his hearers it is the only way, and they agree because they do not have enough other facts at their command to refute it. They are unable, as we say, to see the situation in several aspects.

The mistakes in reasoning which children make have a similar basis. The child reaches for the moon, reasoning, "Here is something bright; I can touch most bright things; therefore, I can touch this." His reasoning is fallacious because he does not have all the facts. This condition is paralleled in the class-

room when students make what are shamefacedly looked back upon as miserable blunders. When one of these fiascos occurs, the cause can many times be referred to the fact that the student did not have enough facts at his command. Speaking broadly, the most effective reasoning in a field can be done by one who has had the most extensive experiences in that field. If one had complete acquaintance with all facts, one would have perfect conditions for reasoning. Thus we see that effectiveness in reasoning demands an extensive array of facts. Accordingly, in your courses of study you must read with avidity. When you are given a list of readings in a course, some of which are required and some optional, read both sets, and every new fact thus secured will make you better able to reason in the field.

But good reasoning demands more than mere quantity of ideas. The ideas must conform to certain qualitative standards before they may be effectively employed in reasoning. They must arise with promptness, in an orderly manner, pertinent to the matter in hand, and they must be clear. In securing promptness of association on the part of your ideas, employ the methods described in the chapter on Memory.[1] Make many logical associations with clearness and repetition. In order to insure the rise of ideas in an orderly manner, pay attention to the manner in which you acquire them. Remember, things will be recalled as they were impressed, so the value of your ideas in reasoning will depend upon the manner in which you make original impressions.

A further characteristic of serviceable ideas is clarity. Ideas are sometimes described as "clear" in opposition to "muddy." You know what is meant by these distinctions, and you may be assured that one cause for your failures in reasoning is that your ideas are not clear. This manifests itself in inability to make clear statements and to comprehend clearly. The latter condition is easily illustrated. When you began the study of geometry you faced a multitude of new terms; we call them technical

[1]*Memory:* See discussion on pages 169-174.

terms, such as *projection, scalene, theory of limits.* These had to be clearly understood before you could reason in the subject. And when, in the progress of your study, you experienced difficulty in reasoning out problems, it was very likely due to the fact that you did not master the technical terms, and as soon as you encountered the difficulties of the course, you failed because your foundation-laying did not involve the acquisition of clear ideas. Examine your difficulties in reasoning subjects and if you find them traceable to vagueness of ideas, take steps to clarify your ideas.

Ideas may be clarified in two ways: by definition and by classification. Definition is a familiar device, for you have had much to do with it in learning. The memorization of definitions is an excellent practice, not as an end in itself, but as a means to the end of effective reasoning. Throughout your study, then, pay much attention to definitions. You will find some in your texts, but you will have to make others for yourself. In order to get practice in this, undertake the manufacture of a few definitions, using terms such as *charity* or *benevolence.* This exercise will reveal what an exacting mental operation definition is and will prove how vague most of your thinking really is.

A large stock of definitions will help you to think rapidly. Standing as they do for a large group of experiences, definitions are a means of mental economy. For illustration of their service in reasoning, suppose you were asked to compare the serf, the peon, and the American slave. If you have a clean-cut definition of each of these terms, you can readily distinguish between them, but if you cannot define them, you will hardly be able to reason concerning them.

Another means of clarifying ideas is classification. By this is meant the process of grouping similar ideas or similar points of ideas. For example, your ideas of serf, peon, and slave have some points in common. Group the ideas, then, with reference to these points. Then in reasoning you can quickly place an idea in its proper group.

The third stage of the reasoning process is decision, based on belief, and it comes inevitably, provided the other two processes have been performed rightly. Accordingly, we need say little about its place in study. One caution should be pointed out in making decisions. Do not make them hastily on the basis of only one or two facts. Wait until you have canvassed all the ideas that bear importantly upon the case. The masses who listen eagerly to the demagogue do not err merely from lack of ideas, but partly because they do not utilize all the facts at their disposal. This fault is frequently discernible in impulsive people, who notoriously make snap judgments, which means that they decide before canvassing all the evidence. This trait marks the fundamental difference between superficial and profound thinkers. The former accept surface facts and decide immediately, while the latter refuse to decide until after canvassing many facts.

In the improvement of reasoning ability your task is mainly one of habit formation. It is necessary, first, to form the habit of stating things in the form of problems; second, to form habits by which ideas arise promptly and profusely; third, to form habits of reserving decisions until the important facts are in. These are all specific habits that must be built up if the reasoning processes of the mind are to be effective. Already you have formed some habits—

If not habits of careful looking into things, then habits of hasty, heedless, impatient glancing over the surface; if not habits of consecutively following up the suggestions that occur, then habits of haphazard, grasshopper-like guessing; if not habits of suspending judgment until inferences have been tested by the examination of evidence, then habits of credulity alternating with flippant incredulity, belief or unbelief being based in either case upon whim, emotion, or accidental circumstances. The only way to achieve traits of carefulness and thoroughness is by exercising these traits from the beginning, and by seeing to it that conditions call for their exercise.

Apply the principles of habit formation already enunciated.

and remember that with every act of reasoning you perform, you are molding yourself into a careless reasoner or an accurate reasoner, into a clear thinker or a muddy thinker.

This discussion shows that reasoning is one of the highest powers of man. It is a mark of originality and intelligence, and stamps its possessor not a copier but an originator, not a follower but a leader, not a slave, to have his thinking foisted upon him by others, but a free and independent intellect, unshackled by the bonds of ignorance and convention. The man who employs reason in acquiring knowledge finds delights in study that are denied to a rote memorizer. When one looks at the world through glasses of reason, inquiring into the eternal *why*, then facts take on a new meaning, knowledge comes with new power, the facts of experience glow with vitality, and one's own relations with them appear in a new light.

CLASS ACTIVITIES

Exercises and Applications

1. Read the article again and fill out the skeleton outline on page 115.

2. Analyze one of your own reasoning experiences. Name and elaborate (*a*) problem, (*b*) plan, (*c*) judgment. *Suggestion*—Work with one of the following topics:

(1) A difficult choice of theme topics.
(2) A purchase when my funds were limited.
(3) Which course of study to pursue.
(4) What work to do in the vacation.
(5) What my life work shall be.
(6) Shall I go to college?
(7) Is the position offered me a blind-alley job?

3. To see if you understand the nature of a reasoning situation, try to recall three lessons you have learned in civics or in history:

(*a*) A lesson in which you learned, remembered, and repeated certain definite facts. *Example:* When, where, under what circumstances, and by whom the Declaration of Independence was signed. Think of another example.

(*b*) A lesson in which you examined, and tried to understand some man's thinking in a difficult situation. *Example:* How Hamilton and others brought about the ratification of the Constitution by the various colonies: their problem, plan, and solution. Give another example.

(*c*) A project in which you yourself did some original thinking; that is, recognized and stated a problem, devised plans, and made a decision. *Example:* Forming a literary society, or a dramatic club. Cite another example.

4. Go through a portion—say fifty pages—of the last textbook you used in literature, in civics, history, or community life. Find problems set forth in those pages which actually involved reasoning. Find others which were memory questions.

5. Think over your last week's work in school. Recall the chief reasoning situation in which you found yourself in mathematics, in science, in French or any other language, and relate this to the class.

6. Mr. Kitson urges you to set yourself intellectual problems, not merely to read and remember facts set forth in the text. Can you name one or more such problems you set for yourself in reading Kitson's article?

7. If you can, test yourself without turning back: What is Kitson's point about the basis for mistakes in reasoning? What are his two chief illustrations? Give an illustration of your own. Why are schools for the masses an important element in the life of a democracy?

8. Try to recount an act of reasoning of your own which was ineffective because you were deficient in one of these four essentials of good reasoning:

(*a*) A sufficient quantity of ideas.
(*b*) A prompt command of those ideas.
(*c*) Ideas pertinent to the problem.
(*d*) Ideas clear and orderly in arrangement.

9. In the light of Kitson's distinction between "clear" and "muddy" ideas, page 119, comment upon the answer, often heard in our classrooms, "I know, but I don't know how to explain it."

10. Kitson says that ideas may be clarified by definition and by classification:

(*a*) "Undertake the manufacture" of a definition of one of these terms: *charity, study, handwork, good looks, civic pride, subway, traffic regulation, school spirit, ambition.*

(*b*) "Undertake" to line up or classify your available stock of ideas that would group themselves under one of the following:

(1) Convenient kinds of transportation.
(2) Safety regulations in our city.
(3) Provisions for public recreation.
(4) Advantages in return for taxation.
(5) The best tests of friendship.
(6) What makes school experiences valuable.

11. An eleventh-grade class in a Chicago high school brought in various oral reports upon the problem: Give an example which shows the importance of reserving a decision until you know the facts (Kitson, page 121). One girl told this experience: She lived with her parents in a large apartment hotel. Frequently they sat at the same dining-room table with a Mr. and Mrs. Blank, who often spoke proudly of a twenty-one-year-old son. The girl and her mother had never seen the young man. One day in 1918 he came home, and to their utter surprise, the boy was not the handsome, strong, gentle, courteous youth his mother had described. He was sickly, sullen, morose, disagreeable. The young lady and her mother concluded that parents are often blind to the true nature of their children.

They continued in this belief for two days. Then the boy's mother told them, "You know John is not as he was. He was shot through the lungs at Chateau-Thierry, and gassed at the same time. He hasn't long to live, and has come home to die."

Said the young woman: "Mother and I made our decision before the facts were all in."

Try the same topic in your class: A case in which I failed to reserve my decision until the facts were all in.

12. Utilize the following headings to classify various problems about which citizens have to do reflective thinking. (One example is given under each; name three others.)

A. Problems of health.
   1. How to avoid contagion.
   2. .....
   3. .....
   4. .....

B. Problems of making a living.
   1. What work do I enjoy?
   2. .....
   3. .....
   4. .....

C. Problems of domestic life.
   1. Can I give up selfish pleasures?
   2. .....
   3. .....
   4. .....

D. Problems of friendship.
   1. "Giving" and "getting."
   2. .....
   3. .....
   4. .....

E. Problems of recreation.
   1. Health vs. mere pleasure.
   2. .....
   3. .....
   4. .....

F. Problems of voting.
   1. What political party shall I join?
   2. .....
   3. .....
   4. .....

13. Prepare a similar classification, with main heads and subheads under the topic "Major Problems of Our School Life."

14. "The power of reasoning stamps its possessor not a copier but an originator" (page 122). Apply this statement to two school projects of your own, in one of which you were a "copier," in the other, an "originator."

SECTION III

THE ANALYSIS OF A COMPLETE ACT OF THOUGHT[1]

JOHN DEWEY

Reading Problem

Study this selection to get a better understanding of what thinking is. Note carefully the short paragraph at the beginning. It is the sign-post paragraph, pointing the way for the rest of the article. During your second reading memorize the five distinct steps in reflection named in this paragraph, and remember how each step goes back for its illustrations to the three examples stated in the beginning.

In this chapter we shall make an analysis of the process of thinking into its steps or elementary constituents, basing the analysis upon descriptions of a number of extremely simple, but genuine, cases of reflective experience.[2]

(1) The other day when I was down town on 16th Street a clock caught my eye. I saw that the hands pointed to 12:20. This suggested that I had an engagement at 124th Street at one o'clock. I reasoned that as it had taken me an hour to come down on a surface car, I should probably be twenty minutes late if I returned the same way. I might save twenty minutes by a subway express. But was there a station near? If not, I might lose more than twenty minutes in looking for one. Then I thought of the elevated, and I saw there was such a line within two blocks. But where was the station? If it were several blocks above or below the street I was on, I should lose time instead of gaining it. My mind went back to the subway express as quicker than the elevated; furthermore, I remembered that it went nearer than the elevated to the part of 124th Street I wished to reach, so that

[1]From John Dewey's *How We Think*, Chapter VI. Copyright 1910, by D. C. Heath and Company; used by permission.

[2]These are taken, almost verbatim, from the class papers of students.

time would be saved at the end of the journey. I concluded in favor of the subway, and reached my destination by one o'clock.

(2) Projecting nearly horizontally from the upper deck of the ferryboat on which I daily cross the river is a long white pole, bearing a gilded ball at its tip. It suggested a flagpole when I first saw it; its color, shape, and gilded ball agreed with this idea, and these reasons seemed to justify me in this belief. But soon difficulties presented themselves. The pole was nearly horizontal, an unusual position for a flagpole; in the next place, there was no pulley, ring, or cord by which to attach a flag; finally, there were elsewhere two vertical staffs from which flags were occasionally flown. It seemed probable that the pole was not there for flag-flying.

I then tried to imagine all possible purposes of such a pole, and to consider for which of these it was best suited: (*a*) Possibly it was an ornament. But as all the ferryboats and even the tugboats carried like poles, this hypothesis was rejected. (*b*) Possibly it was the terminal of a wireless telegraph. But the same considerations made this improbable. Besides, the more natural place for such a terminal would be the highest part of the boat, on top of the pilot house. (*c*) Its purpose might be to point out the direction in which the boat is moving.

In support of this conclusion, I discovered that the pole was lower than the pilot house, so that the steersman could easily see it. Moreover, the tip was enough higher than the base, so that, from the pilot's position, it must appear to project far out in front of the boat. Moreover, the pilot, being near the front of the boat, would need some such guide as to its direction. Tugboats would also need poles for such a purpose. This hypothesis was so much more probable than the others that I accepted it. I formed the conclusion that the pole was set up for the purpose of showing the pilot the direction in which the boat pointed, to enable him to steer correctly.

(3) In washing tumblers in hot soapsuds and placing them mouth downward on a plate, bubbles appeared on the outside of the mouth of the tumblers and then went inside. Why? The presence of bubbles suggests air, which I note must come from inside the tumbler. I see that the soapy water on the plate prevents escape of the air save as it may be caught in bubbles. But why should air leave the tumbler? There was no substance entering to force it out. It must have expanded. It expands by increase of heat or by decrease of pressure, or by both. Could

the air have become heated after the tumbler was taken from the hot suds? Clearly not the air that was already entangled in the water. If heated air was the cause, cold air must have entered in transferring the tumblers from the suds to the plate. I test to see if this supposition is true by taking several more tumblers out. Some I shake so as to make sure of entrapping cold air in them. Some I take out, holding mouth downward in order to prevent cold air from entering. Bubbles appear on the outside of every one of the former and on none of the latter. I must be right in my inference. Air from the outside must have been expanded by the heat of the tumbler, which explains the appearance of the bubbles on the outside.

But why do they then go inside? Cold contracts. The tumbler cooled and also the air inside it. Tension was removed, and hence bubbles appeared inside. To be sure of this, I test by placing a cup of ice on the tumbler while the bubbles are still forming outside. They soon reverse.

These three cases have been purposely selected so as to form a series from the more rudimentary to the more complicated cases of reflection. The first illustrates the kind of thinking done by everyone during the day's business, in which neither the data, nor the ways of dealing with them, take one outside the limits of everyday experience. The last furnishes a case in which neither problem nor mode of solution would have been likely to occur except to one with some prior scientific training. The second case forms a natural transition; its materials lie well within the bounds of everyday, unspecialized experience; but the problem, instead of being directly involved in the person's business, arises indirectly out of his activity, and accordingly appeals to a somewhat theoretic and impartial interest. Here we are concerned only with the common elements of thinking found in all the types.

Upon examination, each instance reveals, more or less clearly, five logically distinct steps: (*i*) a felt difficulty; (*ii*) its location and definition; (*iii*) suggestion of possible solution; (*iv*) development by reasoning of the bearings of the suggestion; (*v*) further observation and experiment leading to its acceptance or rejection; that is, the conclusion of belief or disbelief.

(1) The first and second steps frequently fuse into one. The difficulty may be felt with sufficient definiteness as to set the mind at once speculating upon its probable solution, or an undefined uneasiness and shock may come first, leading only later to definite attempt to find out what is the matter. Whether the two steps are distinct or blended, there is the factor emphasized in our original account of reflection—viz.: *the perplexity or problem.* In the first of the three cases cited, the difficulty resides in the conflict between conditions at hand and a desired and intended result, between an end and the means for reaching it. The purpose of keeping an engagement at a certain time, and the existing hour taken in connection with the location, are not congruous. The object of thinking is to introduce congruity between the two. The given conditions cannot themselves be altered; time will not go backward nor will the distance between 16th Street and 124th Street shorten itself. The problem is *the discovery of intervening terms which when inserted between the remoter end and the given means will harmonize them with each other.*

In the second case, the difficulty experienced is the incompatibility of a suggested and (temporarily) accepted belief that the pole is a flagpole, with certain other facts. Suppose we symbolize the qualities that suggest *flagpole* by the letters *a, b, c;* those that oppose this suggestion by the letters *p, q, r.* There is, of course, nothing inconsistent in the qualities themselves. But in pulling the mind to different and incongruous conclusions they conflict—hence the problem. Here the object is the discovery of some object (O), of which *a, b, c,* and *p, q, r,* may all be appropriate traits—just as, in our first case, it is to discover a course of action which will combine existing conditions and a remoter result in a single whole. The method of solution is also the same: discovery of intermediate qualities (the position of the pilot house, of the pole, the need of an index to the boat's direction) symbolized by *d, g, l,* which bind together otherwise incompatible traits.

In the third case, an observer trained to the idea of natural

laws or uniformities finds something odd or exceptional in the behavior of the bubbles. The problem is to reduce the apparent anomalies to instances of well-established laws. Here the method of solution is also to seek for intermediary terms which will connect, by regular linkage, the seemingly extraordinary movements of the bubbles with the conditions known to follow from processes supposed to be operative.

(2) As already noted, the first two steps, the feeling of a difficulty, and the acts of observation that serve to define the character of the difficulty may, in a given instance, telescope together. In cases of striking novelty or unusual perplexity, the difficulty, however, is likely to present itself at first as a shock, as an emotional disturbance, as a more or less vague feeling of the unexpected, of something queer, strange, funny, or disconcerting. In such instances, there are necessary observations deliberately calculated to bring to light just what is the trouble, or to make clear the specific character of the problem. In large measure, the existence or non-existence of this step makes the difference between reflection proper, or safeguarded *critical* inference, and uncontrolled thinking. Where sufficient pains to locate the difficulty are not taken, suggestions for its resolution must be more or less random. Imagine a doctor called in to prescribe for a patient. The patient tells him some things that are wrong; his experienced eye, at a glance, takes in other signs of a certain disease. But if he permits the suggestion of this special disease to take possession prematurely of his mind, to become an accepted conclusion, his scientific thinking is by that much cut short. A large part of his technique, as a skilled practitioner, is to prevent the acceptance of the first suggestions that arise; even, indeed, to postpone the occurrence of any very definite suggestion till the trouble—the nature of the problem—has been thoroughly explored. In the case of a physician this proceeding is known as diagnosis, but a similar inspection is required in every novel and complicated situation to prevent rushing to a conclusion. The essence of critical thinking is *suspended judgment;* and the

essence of this suspense is inquiry to determine the nature of the problem before proceeding to attempts at its solution. This, more than any other thing, transforms mere inference into tested inference, suggested conclusions into proof.

(3) The third factor is suggestion. The situation in which the perplexity occurs calls up something not present to the senses: the present location, the thought of subway or elevated train; the stick before the eyes, the idea of a flagpole, an ornament, an apparatus for wireless telegraphy; the soap bubbles, the law of expansion of bodies through heat and of their contraction through cold. (*a*) Suggestion is the very heart of inference; it involves going from what is present to something absent. Hence, it is more or less speculative, adventurous. Since inference goes beyond what is actually present, it involves a leap, a jump, the propriety of which cannot be absolutely warranted in advance, no matter what precautions be taken. Its control is indirect, on the one hand, involving the formation of habits of mind which are at once enterprising and cautious; and on the other hand, involving the selection and arrangement of the particular facts upon perception of which suggestion issues. (*b*) The suggested conclusion so far as it is not accepted, but only tentatively entertained, constitutes an idea. Synonyms for this are *supposition, conjecture, guess, hypothesis,* and (in elaborate cases) *theory.* Since suspended belief, or the postponement of a final conclusion pending further evidence, depends partly upon the presence of rival conjectures as to the best course to pursue or the probable explanation to favor, *cultivation of a variety of alternative suggestions* is an important factor in good thinking.

(4) The process of developing the bearings—or, as they are more technically termed, the *implications*—of any idea with respect to any problem, is termed *reasoning.*[1] As an idea is in-

[1]This term is sometimes extended to denote the entire reflective process—just as *inference* (which in the sense of *test* is best reserved for the third step) is sometimes used in the same broad sense. But *reasoning* seems to be peculiarly adapted to express what the older writers called the "notional" or "dialectic" process of developing the meaning of a given idea.

ferred from given facts, so reasoning sets out from an idea. The *idea* of elevated road is developed into the idea of difficulty of locating station, length of time occupied on the journey, distance of station at the other end from place to be reached. In the second case, the implication of a flagpole is seen to be a vertical position; of a wireless apparatus, location on a high part of the ship and, moreover, absence from every casual tugboat; while the idea of index to direction in which the boat moves, when developed, is found to cover all the details of the case.

Reasoning has the same effect upon a suggested solution as more intimate and extensive observation has upon the original problem. Acceptance of the suggestion in its first form is prevented by looking into it more thoroughly. Conjectures that seem plausible at first sight are often found unfit or even absurd when their full consequences are traced out. Even when reasoning out the bearings of a supposition does not lead to rejection, it develops the idea into a form in which it is more apposite to the problem. Only when, for example, the conjecture that a pole was an index-pole had been thought out into its bearings, could its particular applicability to the case in hand be judged. Suggestions at first seemingly remote and wild are frequently so transformed by being elaborated into what follows from them as to become apt and fruitful. The development of an idea through reasoning helps at least to supply the intervening or intermediate terms that link together into a consistent whole apparently discrepant extremes.

(5) The concluding and conclusive step is some kind of *experimental corroboration,* or verification, of the conjectural idea. Reasoning shows that *if* the idea be adopted, certain consequences will follow. So far the conclusion is hypothetical or conditional. If we look, and find present all the conditions demanded by the theory, and if we find the characteristic traits called for by rival alternatives to be lacking, the tendency to believe, to accept, is almost irresistible. Sometimes direct observation furnishes corroboration, as in the case of the pole on the boat. In other cases, as in that of the bubbles, experiment is

required; that is, *conditions are deliberately arranged in accord with the requirements of an idea or hypothesis to see if the results theoretically indicated by the idea actually occur.* If it is found that the experimental results agree with the theoretical results, and if there is reason to believe that *only* the conditions in question would yield such results, the confirmation is so strong as to induce a conclusion—at least until contrary facts shall indicate the advisability of its revision.

Observation exists at the beginning and again at the end of the process: at the beginning, to determine more definitely and precisely the nature of the difficulty to be dealt with; at the end, to test the value of some hypothetically entertained conclusions. Between those two termini of observation, we find the more distinctively *mental* aspects of the entire thought-cycle: (*a*) inference, the suggestion of an explanation or solution; and (*b*) reasoning, the development of the bearings and implications of the suggestion. Reasoning requires some experimental observation to confirm it, while experiment can be economically and fruitfully conducted only on the basis of an idea that has been tentatively developed by reasoning.

The disciplined, or logically trained, mind—the aim of the educative process—is the mind able to judge how far each of these steps needs to be carried in any particular situation. No cast-iron rules can be laid down. Each case has to be dealt with as it arises, on the basis of its importance and of the context in which it occurs. To take too much pains in one case is as foolish —as illogical—as to take too little in another. At one extreme, almost any conclusion that insures prompt and unified action may be better than any long-delayed conclusion; while at the other, decision may have to be postponed for a long period—perhaps for a lifetime. The trained mind is the one that best grasps the degree of observation, forming of ideas, reasoning, and experimental testing required in any special case, and that profits the most, in future thinking, by mistakes made in the past. What is important is that the mind should be sensitive to problems and skilled in methods of attack and solution.

CLASS ACTIVITIES

Problems to Be Worked Out in the Classroom

1. Explain each of the five steps in a complete act of thought: (*a*) a difficulty felt, (*b*) its location and definition, (*c*) suggestion of possible solution, (*d*) development by reasoning of the bearings of the suggestion; (*e*) further observation and experiment leading to its acceptance or rejection. Use examples by referring to a problem of your own.

2. See how quickly you can locate in the discussions of Kitson, of Dearborn, and of Dewey the respective passages which insist upon an abundance of clear ideas as an essential element of good thinking.

3. Why is it better to recall Mr. Dewey's explanation in terms of a situation of your own, rather than to recall the experiences he recounts?

4. A felt difficulty: its location and definition. A party was making a trip by auto from Chicago to Champaign to witness a game of football between two universities. The last twenty miles led through a stretch of wretched country road. After 16¾ miles of this, when the party was within sight of the hard road which led for three miles into Champaign, the car gently but irresistibly slipped into a ditch and stuck fast. It was 12:30; the game began at 2:00. The difficulty, its location, and definition are obvious.

Relate a similar setting for some thinking problem which has come your way.

5. The difference between uncontrolled thinking and critical inference. Mr. Dewey's suggestion is *diagnosis,* in contrast with mere fluttering around. Imagine the diagnosis the driver of the car might make. Imagine, too, what a flutterer would do under similar circumstances. If you prefer, do this with the situation you have described in 1 or 4.

6. An hypothesis: some proposal, or a series of proposals for a way out of a difficulty. We have a slang expression which indicates that a man is "a good guesser." We do not mean a man who makes a lucky draw in a lottery, or who, blindfolded, can light by chance upon a solution of a parlor problem. A good guesser is the one who in the face of emergency can instantly, or upon reflection, bring into his mind one or several possible alternatives for action. With facility he rejects this and that alternative, and seemingly by instinct, but really by keen

intelligence, decides upon a sensible method of procedure. Dewey has this in mind when he says:

> The most important factor in the training of good mental habits consists in acquiring the attitude of suspended conclusion and in mastering the various methods of searching for new materials to corroborate or to refute the first suggestions that occur. To maintain the state of doubt and to carry on systematic and protracted inquiry—these are the essentials of thinking.

Think of some hypotheses which have been set up and proved by men in science. See the example in McMurry, Chapter I, page 23. Your textbooks in science contain plenty of them. Think of a guess which you made that did not prove correct. Why? What were the alternatives?

7. An old definition of education runs: "Education is the organization of power of successful behavior in view of differing emergencies." How does this find support in Mr. Dewey's discussion?

8. Experimental corroboration. Think of the various useless hypotheses which the man with his car in the ditch might consider and so make his party miss the game. Think of a few with which he might briefly experiment. Recalling a like experience of your own, and assuming that his car was in the same straits yours was, what was the best hypothesis to test out if he wanted to see the game?

9. Write out your choice of the following:

(*a*) A simple case of practical deliberation of your own.
(*b*) A simple case of reflection upon an observation.
(*c*) A simple case of reflection involving experiment.

When these are read to the class, let the discussion determine whether you have described a case that clearly falls within the division you have named.

10. "The mind should be sensitive to problems and skilled in methods of attack and solution" (page 133). Apply this principle to:

(*a*) Distinguishing between good poetry and doggerel.
(*b*) Repairing a faulty radio apparatus.
(*c*) Improving one's skill in playing any game.
(*d*) Revising and improving a written exercise.
(*e*) Ridding one's speech of slang.

SECTION IV

TWO RELATED KINDS OF THINKING

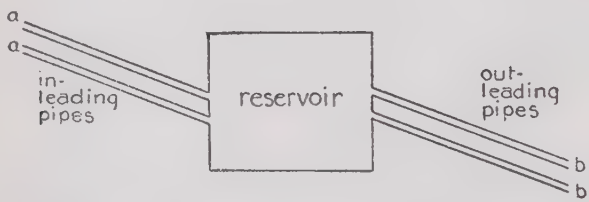
McMurry says[1] that the investigations into the cause of yellow fever employed two different kinds of thinking, called *induction* and *deduction.* These are types of thinking differing from each other, and at the same time closely related to each other, which everyone should understand.

I. THE MEANING OF THE TWO WORDS

Induction comes from two Latin words, *in* and *duco,* which mean respectively *in* and *lead;* induction, then, is *a leading in.* Obviously, *deduction,* coming from *de* and *duco,* means similarly *a leading out.*

II. A GRAPHIC REPRESENTATION

Suppose we imagine a large reservoir with pipes leading into it and out of it.

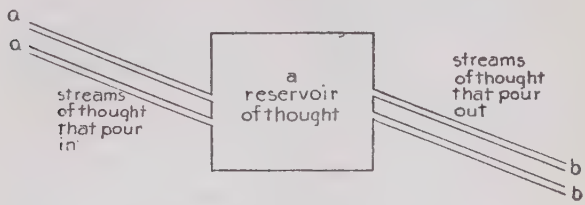


If these passageways and this receptacle contained a liquid, we could readily see that one set of pipes, *a,a,* was designed to fill the reservoir, and the other, *b,b,* to empty it. But in speaking of inductive and deductive thinking, we are not considering

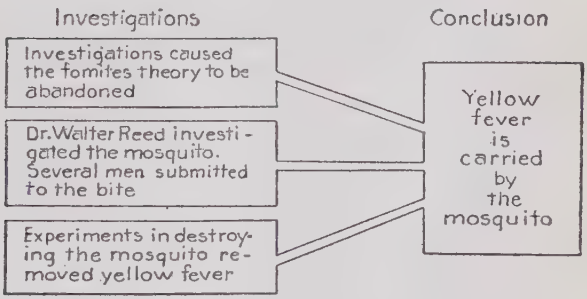
[1] This passage is omitted from the selection beginning on page 23.

a physical substance like a liquid. We have for consideration streams of thinking flowing into and out of the body of thought.

Our diagram may then be changed.



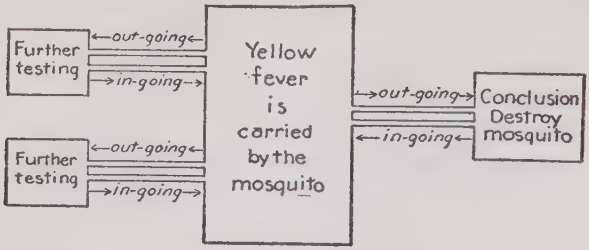
III. HOW THE STUDY OF YELLOW FEVER INVOLVED BOTH INDUCTION AND DEDUCTION



From the investigations and experiments named at the left of the diagram, certain judgments or conclusions flowed into a reservoir of thought, at the right, gathering there the data for an intelligent guess, an hypothesis, as to the cause of yellow fever. In short, the cause of yellow fever was determined experimentally by inductive thinking. Thus in science laboratories the inductive processes are used for the discovery of new truth.

But, as Dr. McMurry suggests on page 23, the hypothesis had to be very widely and repeatedly tested, in order that the investigators might be positive that the right cause had been

found. We may therefore picture the testing processes as follows:



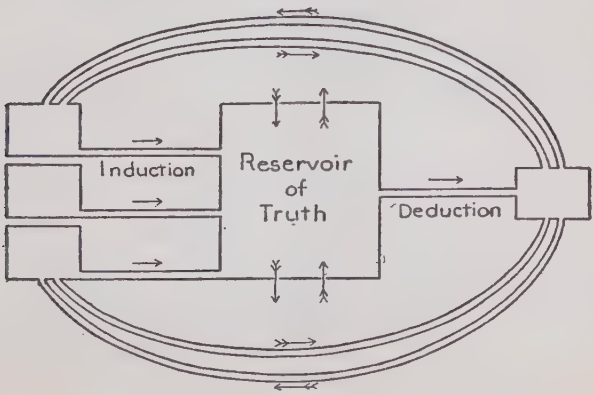
Here we have deduction. Drawn out of the general reservoir on one side are certain features that go back for further testing; drawn out of it on the other are certain elements of judgment, certain inferences which result in conclusions. Thus we may represent the conclusion—Destroy mosquitoes and prevent yellow fever—as the result of a joint process of inductive and deductive thinking.

IV. RELATION BETWEEN INDUCTION AND DEDUCTION

Induction and deduction are not to be considered separate and distinct forms of thinking; they are mutually dependent upon one another. Thus in the last diagram, we must not think of the flow of thought as being only in one direction, viz., from the in-going pipes to the reservoir, and away from the reservoir along the out-going pipes. The flow of thought is in both directions, from the out-going to the in-going pipes of the reservoir as well. When we are in doubt about the truth in the reservoir, the out-going pipes become the in-going pipes and the in-going pipes become the out-going pipes. There is constant flowing of thought back and forth, forth and back, along our line of thinking, so that the reservoir of truth is never at a standstill when we are thinking. Truth is in the making for us; and we, by questioning and testing, become important factors in the making of that truth. The content of our minds is not in the form of a solid, but rather in the form of a fluid, and thinking sets the fluid in motion.

This ought to make us realize the importance of thinking in all our daily life of school and home. If we accept the materials before us without question and learn them by heart, our reservoir of knowledge is not disturbed except for the addition of new portions of truth. Its contents become solidified and take the form of blocks rather than remain in the fluid state. On the other hand, when we think about what we are studying and reading, the content of our study is set in motion and we become factors in shaping the course of events. Thus the boys who really think about their courses in physics are not satisfied with the mere addition of various items to their store of information. One plans a new radio apparatus at home or a modification of the old one. One sets up an electric light in the furnace room or changes the connection of his mother's door bell from dry cells to the current carried by the city wires. Girls adjust some of the operations of their own garment-making or the preparation of food at home, in the light of new principles revealed to them in their domestic science courses. Thus do we count for something when the contents of our minds are not solid but fluid, growing, diminishing, changing, as we read, study, think, judge, apply.

To continue our diagram of mental activity, this movement of thinking, considered as a fluid rather than a solid, may be sketched as follows:



V. HOMELY EXAMPLES OF INDUCTION AND DEDUCTION

(1) A boy repeatedly trying to throw a curve ball, experimenting about how to hold and how to deliver it, is performing an inductive experiment. His thinking is also inductive. A boy pitching in a game, and applying the principles of throwing curves is using deduction; he is applying a truth and a skill he has learned. Suppose the opponents start to hit his pitching and he begins to question why; he asks himself, "What am I doing? How can I change?" He is then thinking and experimenting inductively.

(2) A golf player repeatedly taking practice swings to find out what is the matter with his "follow through" is thinking and practicing inductively. When he is playing the game he applies the skill that he has attained, and is practicing deduction.

(3) Many of the experiments you perform in physics and chemistry classes are deductive in the sense that you are merely verifying principles that have been established. But the original experiments which first established the principles were inductive; they began with an "hypothesis." It can readily be seen that the expertness of the worker largely determines whether his work is inductive. Edison, for example, a master of such subjects as electricity, or Burbank, a master of plant life, may do a large share of his thinking as deduction. On the contrary, a worker less skilled in the field of electricity or botany would be compelled to do much of his thinking by induction. For example, this is the case with a boy building a wireless or radio apparatus; or a girl experimenting in her flower garden.

CLASS ACTIVITIES

Experiences in Gathering Original Data

In your laboratory notebook work out one or more of these problems.

1. Let the boys consult an official baseball "Guide" or "Record Book," or find a September or October sporting sheet of a daily paper which contains the batting averages for all National and American

league players or the players of your own local league. Classify the players by positions; infielders, outfielders, pitchers, and catchers. Establish the batting average for each group. That is, find the actual data which will prove definitely that pitchers are poor hitters, for example, or that outfielders are heavy hitters. Gather the data that will tell you exactly how, as hitters, first basemen compare with catchers.

2. The girls may gather twenty-five advertisements from *The American Magazine, The Saturday Evening Post, Harper's Monthly Magazine, The Century Magazine,* or *The Atlantic Monthly.* Make a general statement concerning the kinds of merchandise advertised in the various magazines, the length of the average advertisement, and the style of appeal made. Let each student take one old magazine, clip out the advertisements, arrange and classify them, to support a conclusion as to the style of appeal or as to the class of merchandise likely to be found advertised in the magazine chosen.

3. Examine the editorials for one week in a daily, or six months in a monthly, or one month in a weekly publication; accumulate and arrange the specific evidence upon which you can base a general statement about one or more of the chief editorial interests of the paper. For a similar inductive study, consult the files of your school paper for the past year.

4. Secure the help of one of the English teachers. Examine the class notebooks of a lower class in your school. Reach conclusions (keeping your records of data by individual pupils) about content, correctness, neatness, originality, and other standards. Prepare a report for your principal.

Problems for Work in the Classroom

1. *Testing the reasoning of school life.* Seeing a difficulty, instantly thinking of possible alternative solutions, rejecting the wrong ones and seizing upon the right one—these are qualities of good thinking. Make use of one of the following projects to illustrate the testing of a guess, an hypothesis.

(*a*) A good quarter-back usually tries out cautiously various "safe" plays in the opening of a game. If the season is over, ask the quarter-back or the team captain to come in to your class to explain the point with examples from this year's games.

(*b*) Recall a physics or chemistry experiment. Recount the problem, and two or three possible solutions which by experiment you were compelled to reject. How did you test them?

(*c*) Consider the need of a school paper, annual, or some other undertaking and several possible ways of financing it. How did you or could you reject all but the most practicable plan?

(*d*) Form a committee for either a real or an imaginary class picnic, party, dance, or entertainment. Let the committee, after preparation and practice, dramatize and present to the class a committee meeting in which various proposals are made, certain ones rejected, and one finally selected.

(*e*) Give to a committee the task of preparing proposals for a new type of assembly program by your group. Let them carefully plan a committee meeting and, after rehearsal, dramatize it before the class. Let the work result in a request to the principal, and if he permits, in a program actually prepared and presented before the whole school.

(*f*) How might better order in the halls be secured through student officers? Propose three alternative methods of organization, and give reasons for rejecting two.

(*g*) Consider the value of a school orchestra, a girls' glee club, or some other musical organization. Suggest methods of establishing it.

2. *Breaking a problem up into its parts.*

(*a*) Taking an example of a stalled automobile, we may find an illustration of the way in which a good thinker proceeds from the gross problem "The car won't go," to the essential features of the gross problem.

> First he looks at his gas tank; then at the feed into the carburetor; then to see if it has "spark"; if not, he looks for loose connections; if he finds none of these difficulties he examines the battery; if the gas and spark are right, he examines the ....., etc.

(*b*) Recall the questions a physician asks, in diagnosing an illness, and compare them with similar skill in another field.

(*c*) Break up one of these "gross" problems into its special parts:

(1) Why are my marks not better?
(2) Why can't I play better tennis?
(3) Why can't I cut ten seconds off my record for the mile?
(4) Why can't I do better in oral composition?
(5) Why am I finding difficulty in this very exercise?
(6) Why was Hamilton a great statesman?
(7) Why is Lincoln revered?

(*d*) Determine which of the parts into which you have broken the gross problem is the "heart," the "crux," of the difficulty. Obviously skill in including at least all *vital* parts in the preliminary survey is indispensable; equally so, is skill in rejecting the minor parts.

3. *Defining a problem.*

(*a*) Mr. Parker speaks of people as having three degrees of efficiency in locating and defining problems. (1) People who, "sitting tight" mentally, do not realize that there is anything wrong. An engine knock does not disturb them. (2) People who have only a "vague idea" that something ought to be done, like the automobilist who, hearing a knock in his engine, begins to tinker at random. (3) People who as skilled thinkers begin by locating and clearly marking out the exact difficulty. When the starter refuses to turn the engine the skilled thinker begins, "Is there spark; is there gas?" etc.[1]

Depending of course on the individual and on the nature of the problem, all men and women find themselves sooner or later in each of the situations named by Mr. Parker. Every automobilist can recall incidents that placed him on each of the three levels in driving a car. In a similar way Mr. L. was on level (1) "sitting tight," when in college a rival beat him out for "end" in the first two games of the season. He was (2) "tinkering at random" when without advice he tried to improve his speaking for a certain oratorical contest; and was (3) "thinking skillfully" when he located at once the two major weaknesses of a student in English composition and told him how to remedy them. A football coach was (1) "sitting tight" when he failed to remove a weak quarterback; was (2) "tinkering at random" when he tried many quarters without deciding on any; (3) was "thinking skillfully" when he substituted heavy players on a wet field.

[1]*Methods of Teaching in the High School*, pp. 105-6.

(*b*) Think of meeting problems, in one of which you have "sat tight," in another "tinkered around," in another "thought skillfully" your way out.

(1) Making something at home
(2) Earning money for a present
(3) Alternative lines of procedure in manual training or domestic science
(4) Finding substitutes for materials needed

4. *Rejecting and selecting proposals after the difficulty is located and defined.* If a person in a perplexity cannot locate and define his problem clearly, he can only by the merest accident reason himself out. Moreover, if he cannot line up the possible alternatives for meeting the difficulty, he is likely to remain in trouble. Even worse off is he if, when he does realize the problem and does know the alternatives suggested, he cannot choose between them. Indeed if one is incapable of decision, it were perhaps better if he never sensed the need of decision. Unfortunately no hard and fast rules for ingenuity and common sense can be laid down. Certain general principles "of cutting to the heart of a problem" may help.

(*a*) Line up, state definitely, and if necessary write out the various proposals, so that they may be considered one at a time. Be sure that you have all the possible solutions that may have any value. Suppose that in settling the Canadian boundary dispute, England and the United States had forgotten the alternative "Arbitration." Suppose, when asked to explain a defeat in football, a member of the team either intentionally or through ignorance gives several explanations, but misses entirely the right one. These are examples of bad thinking.

(*b*) Weed out all suggestions that do not have a direct bearing upon the heart of the perplexity as you have defined it. Proposals to remedy something else, something other than the essential feature, are worthless. Suppose that the question of relieving millions of starving Russians were up for consideration. Good thinking might very well refuse to tolerate any discussion of the form of government in Russia; it might rule out all consideration of Russian aggression in Poland.

(*c*) Weed out suggestions that involve more time, strength, money, effort, suffering, injustice, than the problem itself causes: for example,

no one would today tolerate the inhuman proposal to blot out a nation of enemies after a military victory.

(*d*) Weed out proposals which ignore certain undebatable and unmistakable facts of life. For example, it is an unmistakable fact of American life that the constitution of the United States provides for liberty of religious belief. Proposals to restrict the actions of unusual sects or cults may sometimes be justified on other grounds, but no proposal which neglects "religious liberty" as such can rightly be maintained.

(*e*) Weed out all which do not bear directly upon the heart of the problem. Weed out next all proposals which would do more harm than good. Weed out all that ignore some unmistakable facts or principles of life.

(*f*) Write out all various proposals you can think of to meet one of the following difficulties, or an alternative, as you prefer.

(1) How shall men and women be induced to cast their ballots?
(2) How may we prevent interscholastic athletics from being carried to excess?
(3) How can we improve our literary society?
(4) How can we get better support for our teams?
(5) How can our students be induced to attend class-meetings?

5. Mr. Dewey has likened the process of reasoning to the operation of a primitive debating society. Imagine a group of warriors so primitive in intelligence that each has only one idea. At the council fire each, in turn, presents his one idea. Then, when the suggestions are all in, one after another is rejected, and a choice is finally made. This is what a mind does. If the mind is so feeble that it cannot call up alternatives, it really cannot exercise judgment. The more fertile a mind is in suggestions, the keener must it be in selection. Did you ever fail in a crisis? Was it because you could not devise alternatives? Because you could not choose between alternatives? Explain when and why you failed because of such indecision.

6. It has been said of reading that in the first stage of the reading process, the reader's attitude toward the author is receptive; in the second stage, it is selective.

(*a*) Discuss the point with illustrations from your school work.

(*b*) What does this statement tell you about how to read to understand?

7. The quotation from Lord Bacon which follows is cited in almost every book on reading and studying. How does it bear upon the principle of selection? Answer in terms of books you know.

Some books are to be tasted, others to be swallowed, and some few to be chewed and digested; that is, some books are to be read only in part; others to be read but not curiously [carefully]; and some few to be read wholly and with diligence and attention. Some books, also, may be read by deputy.

8. From your study of thinking, how would you distinguish between a "puzzle" and a "problem"?

9. How does the thinking of a child differ from that of a mature person? Give examples of "childish" thinking in your current school life.

10. Cite instances from your school work in which your thinking has proceeded from a number of pieces of evidence to the formulation of a general principle. Cite instances in which your thinking has applied a general rule to some problems of your own.

11. Professor Robinson has made a criticism of our thinking. Is it justified in your own case?

We do not think enough about thinking, and much of our confusion is the result of current illusions in regard to it. Let us see what seems to happen in ourselves. The first thing that we notice is that our thought moves with such incredible rapidity that it is almost impossible to arrest any specimen of it long enough to have a look at it. When we are offered a penny for our thoughts we always find that we have recently had so many things in mind that we can easily make a selection which will not compromise us too nakedly. On inspection we shall find that even if we are not downright ashamed of a great part of our spontaneous thinking, it is far too intimate, personal, ignoble, or trivial to permit us to reveal more than a small part of it. I believe this must be true of everyone. We do not, of course, know what goes on in other people's heads. They tell us very little and we tell them very little. The spigot of speech, rarely fully opened, could never emit more than driblets of the ever renewed hogshead of thought. We find it hard to believe that other people's thoughts are as silly as our own, but they probably are.[1]

[1] Used by permission from James Harvey Robinson's *The Mind in the Making*, Copyright, Harper and Brothers.

Topics for Work in Class

Take five minutes to choose your topic and ten minutes to plan an extempore oral or written discussion.

1. A conclusion reached without a "therefore."
2. A possible solution that had to be rejected.
3. Trying out a wrong alternative.
4. An example of "mere acquisition" versus "problem solving" in my ..... class. (Well-conducted classes have both.)
5. Having only one idea when I needed many to choose from.
6. A child's mistake in reasoning.
7. An idea that came to me too late.
8. My definition for "acquaintance," "friend," "comrade."
9. A statement I was compelled to reject.
10. A statement I was compelled to accept reluctantly.
11. A problem! At a loss for a solution.
12. A poor guess.
13. A random shot that succeeded.
14. Studying doggedly, but to no purpose.
15. An address, the main divisions of which I clearly remember.
16. The high spot in Mr. .....'s assembly talk.
17. Locating a difficulty; ruling out minor causes.
18. A brief period of "thought-time" at the end of study.
19. A teacher who teaches us to think; when and how to use our minds.
20. Are the good speakers in your group also good listeners?
21. How one of our courses helps make us careful thinkers. Give an example.
22. My idea of a "rattle-brained" person.
23. My experiments with a definite study schedule.
24. When I made a wrong diagnosis in a perplexing problem.
25. Distinguish between "the habit of thinking" and "thinking habitually."
26. Which of Kitson's suggestions will prevent "stuffing" one's mind? Explain.
27. Name and give an account of one or more ways in which you are attempting to improve your methods of study through suggestions in this book.

ADDITIONAL READING PROJECTS

1. Edison on Thinking, B. C. Forbes, "Why Do So Many Men Never Amount to Anything?" *The American Magazine,* Vol. 91, pages 10-11, January, 1921. Interview with Edison showing importance of learning to think.

2. "Kinds of Thinking," N. C. Schaeffer, *Thinking and Learning to Think,* Chap. XVI. Careful thinking vs. loose thinking.

3. "The Nature of Thinking," E. H. Cameron, *Psychology and The School,* Chap. VIII. An easy discussion on the nature of thinking.

4. "Feeding the Mind," Lewis Carroll (author of *Alice's Adventures in Wonderland*), *Harper's Monthly Magazine,* Vol. 112, page 937. The kind, variety, and amount of mental food; hours of taking. Discussion of the rattle-brained person who reads much, but does not think about what he reads.

5. "The Right Use of Books," N. C. Schaeffer, *Thinking and Learning to Think,* Chap. IX. How the reading of books may be a help, and how a hindrance, in the reader's own thinking.

6. "Books and Their Educative Use," G. V. N. Dearborn, *How to Learn Easily,* Chap. IV. Excellent suggestions about the use of books for purposes of study as contrasted with cursory reading.

7. "Is Your 'Thinker' in Order?" G. V. N. Dearborn, *How to Learn Easily,* Chap. V. This chapter requires very careful and thoughtful study. It contains many useful suggestions for a student who wishes to learn how to use his mind.

8. "Examinations," H. D. Kitson, *How to Use Your Mind,* Chap. XIV. How to prepare for examinations and how to take them.

9. "The Nature of Study and Thinking," John Adams, *Making the Most of One's Mind,* Chap. IV. Contrasts constructive work and the mere learning of data.

10. "Painless Thinking," Edgar James Swift, *Scribner's Magazine,* Vol. 70, page 680. "The first principle of straight thinking is the recognition of the obstacles to it."

11. "The Headquarters of the Mind," Hallam Hawksworth, *The Workshop of the Mind,* Chap. I. An easy discussion of how we build our brains by using our minds.

CHAPTER FOUR

Reading to Understand and Remember

To read well is to think well; the eye is merely the servant of the alert mind.

SECTION I

FIVE PRINCIPLES OF READING FOR STUDY

A good student's first duty is to give the writer of the book studied a fair opportunity to present his thought. To do this, he needs to employ five skills which we shall discuss in order.

(A) Look for the Author's Statement of His Main Idea

This may be and often is indicated in the title. Mr. Foster's main idea was "students should study"; Mr. McMurry's, "the principal factors of study"; Mr. James's, "the formation of good habits"; each main idea was stated in the title. In addition to giving a suggestive title, a writer often restates somewhere in the introductory paragraphs the central or main idea he proposes to develop; and not infrequently he gives in his early pages easily recognized hints of the order in which he plans to develop his main idea. A skillful reader learns to be on the watch for such guides or signposts. To be sure, the reader may not always be certain that he has found and has read such hints rightly; but, in the early part of an article, he is alertly looking for guideposts that will help in the reading journey he is to pursue with the writer.

As said above, the central thought suggested in a title is very frequently repeated in one of the opening paragraphs in the form of a definite statement, often called the "theme." After several introductory paragraphs, Mr. McMurry says (page 24):

An analysis, therefore, which reveals the principal factors in this study [of the conquering of yellow fever] is likely to bring to light the main factors of study in general.

The reader, recognizing this as McMurry's "theme," knows that he will meet several ideas about the factors of study. Foster's first paragraph (page 36) repeats in two different ways the question of his title, "Should Students Study?" The effect of the repetition is to give the careful reader an anticipation for the classified evidence which is to follow. The first sentences in almost all the paragraphs of Lockwood (pages 48 ff.) are signposts of the elements of his thought developed within them. After his introductory paragraphs, James speaks (page 96) of two maxims of habit formation. The intelligent student knows immediately that the discussion which follows will develop at least two maxims, which will be the meat of the article for him.

It is a good practice for a reader, when he has found a statement of the principal thought that will be developed by the writer, to express it to himself in one terse sentence, using his own rather than the author's words. One writer amplifies this idea of restating the theme as follows:

A most common source of error is found in the particular wording given [by the student] to the central thought. In order to be perfectly definite and accurate any thought should be expressed in the form of a full statement. It ordinarily takes at least a whole sentence to express a whole thought. But it is very common even for students who have formed the habit of thinking by points, to allow brief headings, consisting of single words or short phrases, to represent entire thoughts. Although such headings, on account of their brevity, may be useful, they are merely names for the thought, not statements of the thought itself; and it means the loosest kind of thinking to stop with them. It is usually easy to tell "what a page is about"; but it usually requires keen thinking to word its principal idea sharply in a full sentence. Many students are inaccurate in the interpretation of authors and in their own meaning, because they lack the energy to continue their thinking to this point of wording the central idea accurately in a full sentence.[1]

[1]Used by permission from A. L. Hall-Quest's *The Textbook*, page 152. Copyright, The Macmillan Company.

(B) Keep the Main Idea in Mind While You Are Reading

After he has found and restated the main idea in his own words, a good reader makes a special effort to keep that main idea prominently in mind as he reads forward. He stops to recall the principal idea, if he is likely to forget it for the moment, when reading some interesting details.

Badly developed articles and addresses which obscure their main ideas by a mass of details are easily recognized. Have you never heard a speaker tell a long drawn-out story by way of developing a point—a tale which is in itself so entertaining that the audience loses track of its application? Similarly, a writer may obscure from his readers the progress of his main line of thought by the use of too many anecdotes or other data. By such over-elaboration a skillful reader refuses to be misled; desiring to know the author's main thought and its development, he puts down as incompetent the man who persists in extensive or over-frequent narratives. A well-trained reader always keeps in his mind the writer's major idea.

(C) Notice How the Various Divisions Are Related to Each Other

This is the way Mr. Foster's article looks when his main idea is developed by its supporting ideas:

SHOULD STUDENTS STUDY?

I. High scholarship in high school means success in college.
   1. Professor Dearborn's study bears proof of it.
   2. The experience of The University of Chicago gives supplementary evidence.
   3. Reed College has similiar data.

II. High scholarship in college means success in professional schools.
   1. Records in Harvard Medical School show it.
   2. Records in Harvard Law School show it.
   3. Records of Yale graduates in Harvard Law School show it.

III. High scholarship in professional school means success in life.

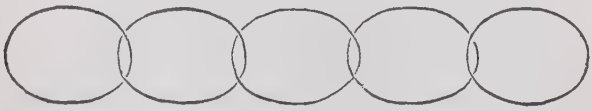
1. Harvard graduates of 1894 show it.
2. University of Oregon graduates prove it.
3. Kansas agricultural school data support it.
4. Washington graduates indicate it.
5. Professor Dexter's study of twenty-two colleges supplies evidence.
6. More than thirteen thousand living alumni of two northwestern colleges furnish data.

Perhaps this explanation will give a clearer idea of the purpose and nature of an outline. The point in mind here is that each main division, and each paragraph within the divisions, has something to do with the main idea. A division of thought almost invariably performs one of these functions:

(1) It may explain what the main idea is.
(2) It may present data to establish that main idea.
(3) It may furnish additional information.
(4) It may give an illustration.
(5) It may, in some other way, assist the reader to keep the main idea in mind and to understand it more thoroughly.

There are several striking ways in which the various divisions of an author's thought may be related to each other.[1]

(1) In a story or novel, one idea may lead to another like links in a chain. The sequence may be represented thus:

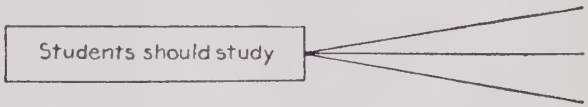


Of course, the chain diagram is but a rough indication of the

[1]See Briggs, McKinney and Skeffington, *English Composition*, Second Book, pages 21-22. Copyright, Ginn and Company.

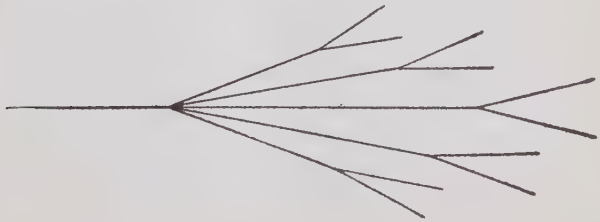
sequence of thoughts. Everyone knows that the links in the chain of events in *Silas Marner, Ivanhoe,* or *The Necklace,* are not of equal and uniform size. The various incidents which lead up to Macbeth's decision to commit the murder of Duncan are of gradually increasing intensity and significance. A chain which could adequately represent any of these sequences would consist of links of various sizes and assortments.

(2) A second relationship of ideas is found in an article like Foster's "Should Students Study?" All his major ideas (I, II, III, pages 37, 38, 40), based upon an abundance of data, seem to radiate from a central point. This relationship of ideas may be represented thus:



Again, a careful reader may rightly say that Foster's three divisions are not of equal weight; that the diverging lines of the diagram should in some way, by differing in length or width, indicate varying degrees of significance. This is true; but in general, as in all drawings, diagrams, illustrations, and figures of speech, the radiation of lines from the central point approximately represents the relation of parts to the whole.

(3) A third way in which authors relate their ideas to each other is represented in this diagram:



The ideas grow out of each other very much as the branches of a tree reach out from the trunk. The example in this book that best indicates this in Lockwood's article on pages 48 ff. Glance through that again to see the trunk line, the five major limbs, and the lesser branches. The thinking all reaches back into the major topic stated in the title.

(4) A fourth type of relationship in ideas may be represented by a series of concentric circles, or by a coil gradually unwinding from a central core.

These diagrams roughly represent the case of the speaker or writer who, in successive parts, repeats his major idea in different terms, and perhaps with different illustrations for the sake of cumulating emphasis. An example of this relationship of ideas is found within the divisions of Mr. Foster's article. Each of the headings marked (1), (2), (3), etc. (page 37), might be represented by a circle or coil. It is easy to imagine a sermon similarly organized; for example, one in which the minister urges, with five concentric divisions of his speech, the theme: "It is more blessed to give than to receive."

The point to grasp is this: An expert student is not content until he sees how the author whose article he is reading organizes the various parts of his theme and relates them to each other. It is decidedly a mark of weakness in a reader if he grasps blindly at an article, trying to recall certain parts quite apart from their significance as related to the whole and to all the other parts.

(D) Vary the Rate of Reading in Accord with Your Purposes in Reading

So far we have considered three stages of the technique of reading to understand an author's thought: (*a*) Looking for his main idea, (*b*) Keeping this ever in mind, (*c*) Noting how the various parts of the developing thought bear upon the main idea. We come now to the fourth. Some skillful readers find it helpful to read rapidly through an entire selection in order to get a preliminary bird's-eye view of the reading journey they are to take with the writer and to select the high spots in his thought for deliberate second reading. On the contrary, other capable readers prefer to proceed deliberately and carefully in their first reading, scanning rapidly in their second reading for review.

No one can say which of these two contrasted practices is better in study reading. Each reader must decide which habit is adapted to his own temperament, and which produces for him the most acceptable results. It may be said that most people find rapid first reading appropriate when they are studying, and deliberate first reading appropriate when they are reading for pleasure. Or to put the distinction in another way: If the reading matter in hand is like most of the articles in this book, articles with little pretension to literary style, explanatory in their purpose and content, a bird's-eye first reading is preferable. If, on the other hand, the selections are *literature,* in the usual meaning of that term, if the reader is interested not only in what the author says and what he means, but also in how he says it, a deliberate first reading may be more appropriate. Agreeing then, that no hard and fast rule can possibly be laid down, we may say that literature of *knowledge,* which we study primarily for information, may wisely be scanned in a first reading, and that literature of *power,* which we read primarily for pleasure or for culture, may wisely be read slowly in a first perusal.

Since we are considering reading for the purposes of study in the first half of this book, and are attempting to analyze habits of work which are appropriate for the literature of knowledge as contrasted with the literature of power, we may discuss here the methods employed in rapid first reading. The procedure may be summed up as follows:

RAPID PRELIMINARY READING

(1) Read headings and captions. If the article has headings or captions, the task of preliminary rapid reading consists merely in looking them over to get a bird's-eye view of the whole article or chapter.

(2) Read by paragraphs. Let your eye fall on opening sentences. If one promises that its paragraph is vital, let your eyes pass down through the paragraph, reading a sentence, possibly in the middle or at the end.

(3) Give important paragraphs more detailed consideration. Usually the opening paragraphs, as we have seen, state the general theme, and give suggestions through leading sentences of the course of the writer's thought. The last paragraphs very frequently sum up, or restate the points made during the body of the article.

(4) Look for signpost paragraphs. The reader occasionally comes upon short, terse paragraphs at the close of divisions of thought, or at the beginning of others. Such paragraphs are distinctly guides; they either point backward to ground just covered or point forward to ground about to be traversed.

(5) If possible, read by parts that are larger than paragraphs. Certainly the reader cannot pause to dwell upon words or phrases. He must be able to fill in the thought of a page from a few hints here and there, from a few prominent words upon which his eyes light. His purpose is not primarily reading; it is rather finding out what he needs to read intently as he goes through the selection a second time.

The purpose of a first rapid preliminary survey is not merely to secure a bird's-eye view of the whole. Equally important is the selection of what may be called the high spots. Such selection is often made by the skillful reader of a novel. For example, someone says that "Chapter Forty-nine shines out like a planet amid the sparkling firmament" of Dickens's novel *Martin Chuzzlewit*, because of the "division among friends," as the famous quarrel between Sarah Gamp and Betsy Prig was called. Perhaps you have read and reread The Tournament at Ashby and the Siege of Torquilstone in *Ivanhoe*, or have selected for rereading the sleep-walking scene in *Macbeth* or the trial scene in *The Merchant of Venice*. The suggestion will at once come to your mind that picking out the high spots in a first reading of a novel or play is quite different from the reading we have so far considered in this book. That is true; but the principle of selection is not very different, and skilled readers do reread the most interesting parts of their favorite novels. They read them again and again, just as devout people select parts of their Bible for frequent perusal.

In these suggestions about a rapid first reading, we have been thinking of parts of approximately one chapter in length. A reader is not to stop till he has read through an entire selection, if that selection can be looked through in a reasonable time, say fifteen or twenty minutes. It is wise to stop the preliminary rapid reading at any convenient division of thought after about the length of time indicated. Twenty minutes of the rapid survey here indicated ought to cover from twenty to fifty pages, according to the nature of the material read. Do not make the mistake of thinking that such skipping is reading in the truest sense. It serves one purpose only—that of getting a preliminary bird's-eye view.

(E) Reread Deliberately and Thoughtfully

Careful rereading may apply either to the entire selection or to the parts which the preliminary survey has indicated are the most

important. In almost any selection except those in textbooks, some parts require but slight attention. This is especially true of portions which do not bear directly upon the central idea. The central theme itself and its chief supporting ideas are the gist of the reading. Look for them; cling to them; and in the second rereading, dwell upon them. The sense of relative values is always important.

Two hundred years ago, Isaac Watts advised a preliminary survey of the contents and general tenor of a book, to be followed by a deliberate and careful second reading of parts of greatest value. He expresses the best practice in these words:

> Books of importance on any subject should be first read in a more general and cursory manner, to learn a little what they promise and what you may expect from the writer's manner and skill. For this end I would advise always that the preface be read and a survey taken of the table of contents, before the survey of the book. By this means you will not only be better fitted to give the book the first reading, but you will be much assisted in your second perusal of it, which should be done with greater attention and deliberation, and you will learn with more ease and readiness what the author pretends to teach.
>
> In your reading, notice carefully what is new or unknown to you before, and review those chapters, pages, or paragraphs. Unless a reader has an uncommon and most retentive memory, there is scarce any book or chapter worth reading once that is not worthy of a second perusal. At least take a careful review of all the lines or paragraphs which you selected as important and make a recollection of the sections which you thought truly valuable.
>
> There is another reason also why I choose to take a cursory survey of a book before I sit down to read it and to dwell upon it with studious attention; that is, that there may be several difficulties in it which we cannot easily understand and conquer at the first reading, for want of a fuller comprehension of the author's whole scheme. Therefore, in such books, we should not delay in the first perusal till we master every difficulty, for perhaps many of these difficulties would appear to be solved when we have proceeded further in that book, or would vanish of themselves upon a second reading.

If, after you have finished rereading, you can lay aside your book, close your eyes, see a fairly clear path of thought with its parts, by which the writer has made good his central idea or has tried to make it good; if you can in a brief summary restate that course of thought orally to yourself or to others, you have performed one duty of a careful student. You have been intelligently receptive. You have laid hold upon the writer's thought.

There are, then, five steps of reading to understand:

(1) Look first for the author's statement of his main idea.

(2) Keep this main idea in mind as you read.

(3) Notice how various parts of a selection bear upon the writer's main idea.

(4) Vary the rate of reading in accord with your reading purpose and with the nature of the materials. A rapid first reading is often helpful.

(5) Reread deliberately, paying special attention to essential parts.

CLASS ACTIVITIES

Class Exercises

1. Verify all of the references to "themes" on page 150, and try to find theme sentences in other articles of this book.

2. Locate signpost paragraphs in any of the selections in this book.

3. Mr. Bolton, on page 87, criticizes strongly a process of repeated skimming, leaving a lesson only half learned. Explain how the advice for preliminary rapid scanning given in the present section is not inconsistent with Mr. Bolton's criticism.

4. Which of the general plans of organizing thought discussed on pages 152-54 is used in Mr. Dewey's article on page 126; in Mr. Kitson's article on page 115?

5. Using the article beginning on page 161, turn through the pages quickly as if you were following out the principles of rapid reading discussed on page 156. Select the parts carefully which you would need to reread slowly.

6. What would you consider the most essential part of each of the first three articles in Chapter III? Explain your choice; discuss differences of opinion on this question.

7. Use these topics for extempore two-minute talks:

(*a*) A case of judicious "skipping" in my reading.
(*b*) A case of injudicious skipping in my studying.
(*c*) A long illustration which distracted my thought.
(*d*) How a definite reading purpose helps in rapid preliminary reading.

Reading Projects

1. Wm. J. Gaynor, at the time mayor of New York, wrote for *The Independent* an article called "Books and Reading," Vol. 73, page 1191. Use this as a study passage. He shows that "reading is to no purpose without thinking." He gives information about the reading habits of many distinguished people, and tells of his own practices as a reader. Give an oral report of Gaynor's article.

2. "The Reading Habits of Distinguished People." *The Independent*, Vol. 93, page 252, has an article which explains the reading habits of Miss Ida M. Tarbell, of Hon. G. H. Hodges, former governor of Kansas, of President E. B. Bryan of Ohio University, and of others. Report the chief reading habits of each of these persons.

3. Find an account of Benjamin Franklin's reading. Examine his *Autobiography* or the second volume of Sparks's *Life of Benjamin Franklin,* or any other life of Franklin to which you may have access in your libraries. See how quickly you can locate the passage that tells about Franklin's reading and reading habits. Report.

4. Read the article "On Skipping" by Thomas L. Masson, in *The Bookman,* Vol. 51, page 426. Report to the class the substance of this satire of one who pretends he has read, but has not.

SECTION II

REASONABLE RAPIDITY AND REASONABLE THOROUGHNESS IN READING

"You were too long at that task."

"You did not perform that task thoroughly."

These two comments made either alone or together, about any duty that we have to perform, are perhaps the severest criticisms that we can receive. It matters not what the activity we are expected to carry out. After a boy has mowed a lawn, or a girl has swept a room, a parent, upon inspecting the work, applies to the job two main standards of good workmanship: how long did it take; how thoroughly was it done? If the worker dawdles, consuming two hours when one hour would have been ample, the criticism is "too slow." On the other hand, if the worker leaves grass uncut about the edges of the lawn and the sidewalks, or wisps of broom scattered about, dust on the furniture, and rugs rumpled on the floor, the criticism is "not thorough." Reasonable economy of time and reasonable thoroughness of accomplishment, as two tests of good work, may be applied to almost every duty of life.

The two tests are applicable to the silent reading which constitutes one part of the processes of study. Assume that a class is asked to read in one study period a passage of about fifty pages of fairly easy historical material. If the class is composed of average students, at the close of the hour some will have read ten pages, some twenty, some forty. Others will have read the entire assignment twice, once rapidly in a preview, and a second time more slowly, dwelling upon the essential parts. And this wide difference of reading accomplishment is present, assuming that all the students diligently did their

best throughout the entire study period. The fact is that a group of thirty students show widely varying attainments in economy of time in reading. They have different reading habits. Extremely rapid readers cover five times more ground than the extremely slow. This is not idle statement; it is a fact which is doubtless true in your own group, during the period in which you are now reading. Some of you are wasteful of time in silent reading.

Moreover, the class will vary within somewhat narrower limits as to the reasonable thoroughness with which they comprehend the meaning of the fifty pages of history. At the close of the period some will be able to state accurately the central idea of the passage, will be able to repeat the major divisions of the theme, and will have considered the meaning and application of the facts presented. Others will possess only a vague idea of what the passage is about. Investigations have shown that in the ordinary group of students some will comprehend what they read at least three times as well as others. It is altogether probable that some of the members of your own class, while reading the articles of this book, vary in their thoroughness of comprehension in at least the ratio 3:1.

There is a very unmistakable relation between reasonable economy and reasonable thoroughness in reading. Under ordinary conditions, the reader who covers his assignments with moderate speed is more likely to comprehend well what he reads than is the skimmer who merely glances over the pages or the plodder who toils through the selection word by word, sentence by sentence. Reasonable economy of time is almost always accompanied by reasonable thoroughness in comprehension.

The reason for this fact is not far to seek. All through the discussions in this book we have been thinking of reading as the process of grasping ideas found upon the printed page. These ideas are not words, sentences, and paragraphs; the printed page is composed of mere symbols which embody the ideas. Moreover, the ideas themselves are not a lot of separate

and isolated units, like so many pebbles on the seashore; they are rather like a string of stones set in a necklace; they are bound together by a thread of thought. The relationships between ideas, their order and sequence, their individual contributions to the main stream of thought, are almost as important to the reader as are the individual ideas themselves.

Upon this basis rests the explanation of why reasonable rapidity in reading and reasonable thoroughness go hand in hand. The plodder or the dawdler advances too slowly to see relationships; the habitual skimmer proceeds too rapidly to see relationships. To use a homely figure: The plodder "cannot see the forest for the trees"; while the habitual skimmer sees only the dim outlines of the forest. The *symbols* occupy the plodder's time. Each single idea requires too much energy. He loses perspective. The skimmer retains nothing but perspective. But, on the other hand, the reader who has developed habits of economy in his rate of reading is far more likely to grasp the relationships of ideas.

No discussion of reasonable economy of time in the performance of any duty, including reading duties, can omit another fact of time adjustment. That is, life does not always give a student a preparation period of exactly forty-five or exactly sixty minutes for a history lesson. Amid the pressure of other duties an editor may occasionally find it imperative to write an article in fifteen minutes; a minister may find that one forenoon, not three as ordinarily, must suffice for the preparation of his Sunday morning sermon. Sometimes a lawyer must condense his preparation for even an important case into limits of time far narrower than his ordinary procedure allows. All workers are called upon occasionally to turn out a product under conditions of high pressure by intensifying their preparation. And it must be borne in mind that the value of the product which is thus prepared under stress of limited time is not judged with more than ordinary leniency. Teachers, Sunday congregations, juries or judges, are not accustomed to ask a speaker:

"How much time did you have at your disposal?" They ask: "What about the product; is it good, indifferent, or poor?" This principle from real life cannot be denied. Its application to the performance of school tasks ought to lead the student to frequent exercise of short periods of extremely high tension, in which his mind as an intent worker is firmly set on a good product in spite of limited time for preparation.

Possibly you have been irritated by the constant repetition throughout the preceding paragraphs of the word *reasonable.* Let us see if that frequent repetition can be justified. Every boy who has mowed lawns and every girl who has swept rooms will agree that no two lawns are equally hard to cut and that no two rooms are equally hard to sweep. A problem in mathematics or an experiment in science is not just a problem or an experiment. To use a homelier example, the cleaning of a Ford car after a dusty trip is not the same job as the cleaning of a Packard after a trip in the mud, although both are tasks of cleaning cars.

The same truth applies to various reading and study tasks. One assignment of fifty pages, an extremely interesting narrative of the siege of Yorktown, or an account of the duel between Hamilton and Burr, is an easy task compared with fifty pages which analyze in detail the economic condition of the colonies in 1798 or the destitution of a country swept by the ravages of war. The reading of an easy poem like "The Ride of Paul Revere" is not an identical task with the reading of a hard poem like "My Last Duchess." Every reading task has an individuality of its own. It resembles other similar tasks in a general way, but it has its own degree of difficulty, its own perplexities. Therefore, what is economy of workmanship in one reading problem might be extreme wastefulness in another, even if the two duties are both reading tasks. That is why we must use the adjective *reasonable* in speaking both of economy and of thoroughness.

Obviously, if we have to limit both rate and thoroughness

by such a qualifying adjective as "reasonable," it is almost impossible to estimate with mathematical precision the speed with which an efficient reader advances. We may, however, venture a calculation, imagining that the worker is reading simple and fairly easy prose, like the present discussion. In general, one's rate of silent reading ought to be about three times as rapid as his rate of oral reading. A very deliberate oral reader or speaker utters about one hundred words a minute; ordinary speakers utter approximately one hundred twenty-five per minute; rapid speakers, one hundred fifty; and those who are extremely rapid rise to about two hundred words in sixty seconds. But a silent reader ought to read fairly easy material at the rate of at least three hundred words a minute; his skill is probably not high unless he reaches four hundred words in sixty seconds.

Unless you have had your attention directed to economy of rate, and have deliberately speeded up your rate according to the suggestions on page 156, it is probable that you are one hundred words a minute too slow in ordinary silent reading. You recall that greater speed does not necessarily mean a falling off in thoroughness of comprehension; it means the very opposite. The concentration necessary for increased speed, enabling the mind better to see relationships of ideas, really results in additional thoroughness of comprehension.

When trying to speed up your silent reading until it approximates reasonable economy of time, bear in mind that there are materials which need to be read very deliberately. This is particularly true of a great piece of literature. While he is reading a poem, a reader needs to sense it, to feel it, to appreciate the style, to see all the delicate shades both of thought and of expression. Moreover, as we shall see in later chapters, great literature always leaves a very large share of the work to the reader himself. "The quality of mercy" speech in *The Merchant of Venice* challenges the reader to let his mind dwell upon its meaning, to supply out of his own life an abundance

of experiences which support the truth upon Portia's lips. In fact, the maker of literature is dependent upon such contributing powers on the part of his readers. Reasonable rapidity in reading a great poem may be very slow speed indeed, as compared with the perusal of a reference book to locate a definite piece of information, or the reading of an easy story, the outlines of which ought to pass through the reader's mind in easily moving succession.

The reading of a textbook should normally be slow. Materials in textbooks are highly condensed; they cover a large field in limited space. They often present a multitude of facts and figures. In short, a textbook calls for the economy of time which points toward deliberateness rather than haste, for somewhat the same reason that great poetry should be read slowly. Each calls upon the reader to do a large amount of supplementing, thinking, weighing, applying. Do not forget, however, that the real study of a passage in a textbook is normally a *second* reading. It is often preceded by a first bird's-eye view of the whole, a preliminary survey to get the lay-out of the reading journey that is to be taken later by leisurely stages. Rapid first reading; deliberate and thoughtful second reading of actual study material is in order.

CLASS ACTIVITIES

A Class Project: Determine the Rate of Silent Reading

Select any fairly easy essay in one of your literature books, or choose Mr. Kitson's article beginning on page 115 of this book. At a given signal begin reading silently and read at your normal rate for exactly five minutes. Mark the place at which you stop. Estimate the number of words on a page by averaging three passages of ten lines each. Then arrange the names of the class in a column on the board, in the order of the number of words each reports. The number halfway down the column indicates the class "median" rate, for there are just as many in

your group who read more rapidly as there are who read more slowly than the one indicated by the median number. This median for fairly easy material should be in the neighborhood of 300 words a minute for a high-school senior class.

You will discover a fairly wide range of rate between the swiftest and the slowest readers; perhaps that difference may reach the ratio 2:1 or even 3:1. Probably the readers at the two extremes are reading too rapidly and too slowly, respectively.

Follow this with a discussion of rate in silent reading (see page 165): What causes slow reading? What is the effect of very rapid reading? Why does it seriously interfere with economy in school work to read with one's lips? Other questions may arise.

Individual Projects

1. Theodore Roosevelt must have been a very rapid reader. An article in which he describes his reading habits is to be found in *The Literary Digest,* Vol. 50, page 896. Look up the article and report in detail what Mr. Roosevelt means by the suggestive phrase "reading through a subject." He says in part:

> If I get interested in any subject I read different books connected with it, and probably also read books on subjects suggested by it. . . . Now I read Burroughs too often to have him suggest anything save himself; but I am exceedingly glad that Charles Sheldon has arisen to show what a hunter-naturalist . . . can do for our last great wilderness, Alaska. From Sheldon I turned to Stewart Edward White and then began to wander afar, with Herbert Ward's *Voice from the Congo* and Mary Kingsley's writings . . . and Grahame's *Sketches of South Africa.*

2. The Syracuse, New York, Public Library has published a little pamphlet entitled *Roosevelt, Lover of Books.* You may be able to obtain a copy at your Public Library; certainly you can purchase one for fifteen cents, from the Syracuse Library. In compact form is presented a survey of Mr. Roosevelt's books and reading tastes. Collected also are his comments like the following:

> Mark Twain, who was not only a great humorist but a great philosopher, said that there are 869 different kinds of lies, but that the only one authoritatively prohibited is bearing false witness against your neighbor.

Make a study from these quotations and reach conclusions about Mr. Roosevelt's characteristic reactions to books. Verify one or two of the most important comments by references to the books from which his citations, with page references, are made.

3. An editorial in *The Independent,* Vol. 59, page 225, entitled "Just One Book" affirms that John Burroughs's *Far and Near* is just the one book to take on a vacation in the woods. The article gives reasons why the very careful reading of one book, on such a trip, seems to the editorial writer much better than the reading of many books. Look up the editorial and Mr. Burroughs's book. Report.

4. Appoint representatives to interview prominent men and women in your city who are known to be widely read. Report.

Topics for Oral or Written Work

1. Why rapid reading may assist comprehension.
2. Why read a difficult passage aloud.
3. When I charged myself with dawdling.
4. When I failed to be thorough.
5. A book I chose for a vacation trip.
6. A subject upon which I have read widely.
7. What makes me a slow reader.
8. The old proverb: Make haste slowly.
9. A book that I often reread.
10. Why poetry should be read slowly; examples.

SECTION III

READING TO REMEMBER

In searching for and finding the central theme of a writer, in watching for and detecting the forward movement of his thought as one division follows another, the student has performed his first study as a reader. He has still another to perform in order to complete the receptive process in reading. He must fix the author's thought in his own mind so that he can remember it, and on occasion repeat or summarize it. To perceive the message, to fix it in mind, and to be able to reproduce it are the receptive duties of a student. To be borne in mind here is a distinction between the sheer act of learning something by heart, and remembering ideas.

Certain habits of working assist in the second receptive activity just referred to:

(*A*) *Have a strong determination to remember.* Read with a strong determination to ascertain and remember the essential parts. Give your undivided attention to the content, resolved that you will retain the major ideas. Strange, what you can do if you really make up your mind to do it! Of course, you need to choose carefully what you want to remember. Once selected, these parts can be recalled at will, if you set your mind to the task. Think of the time when you will need the information or the ideas.

(*B*) *Analyze the meaning of what you wish to remember.* Be sure that you understand very clearly the meaning of the parts you are to remember. You cannot permanently retain something the meaning of which you but vaguely understand, although for the time being, after much diligent application you

can repeat the words in which the author originally stated an idea. Doubtless each of us, by main strength, remembers certain number combinations, like 6 x 9 = 54; 7 x 9 = 63; 8 x 7 = 56. We may not realize it, but we never usefully remember these combinations, or any similar combinations, until we have thoroughly understood them. We all know how to recall the thirty-one-day months: "Thirty days hath September," etc.—a mere little pleasing jingle of a formula; few recall definitely learning it. Yet how often we use it. Fortunate, indeed, we should be, if similar jingles could help us remember what we study in school. As a matter of fact, such devices are very meager in number, and very generally useless.

Far better than the attempt to associate what you wish to remember with a device of this sort, generally of little more value than a string around your thumb, or a ring placed on the wrong finger, is the careful attempt to understand the new idea by comparing it or contrasting with ideas already in mind. If by comparison and contrast, you tie up a new theorem of the triangle with the theorem which you learned yesterday, you more easily remember both. The secret of good memories is that they form very many different associations around every fact they wish to remember. Active minds, minds that think most about their experiences, that weave those experiences into systematic relations with each other, are the minds with the best memory. It is quite obvious why some boys never forget an idea that concerns stamp collecting, or wireless, or an automobile engine, while they easily forget Latin declensions or facts of history. They think and talk much about the former subjects.

(*C*) *Remembering ideas as they are related to each other.* We have seen that a well-written article has a development of thought in orderly sequence. The various parts are joined to each other; each follows the one which precedes for a reason; and each part has a relationship to the section which immediately follows it. Seeing this sequence of ideas as the author presents them, the whole theme made up of parts definitely

bound up with each other—seeing relationships, as Dearborn explains it on page 110—is an essential condition of remembering the thought. Knowledge is not made up of a lot of separate particles like lumps of coal in a bin. Isolated and unrelated facts are almost valueless and extremely hard to remember. But when facts are associated in the mind, when they are welded together in some relationship, meaning, or significance, they can be retained in memory. Perhaps you have heard a football enthusiast, years after a famous game, relate the important details of that contest. His memory is accurate because the details were all welded together in a total meaning which permanently holds together the details themselves.

To remember ideas as they are related to each other in a book you are studying, form the habit of restating the author's divisions of thought in your own words, often actually saying aloud your summarizing sentences. For example, at this point in this present discussion you might summarize as follows:

READING TO REMEMBER

Meaning: After grasping an author's thought, a good reader remembers it in order to reproduce it.

(*a*) He reads with a strong determination to recall.

(*b*) He tries hard to see the meaning of each part, the "heart" of each division of thought.

(*c*) He endeavors to see how the parts of thought fit together, what relationship they bear to each other.

(*D*) *Fix key-words in mind.* The fourth principle of remembering thought is this: Endeavor to find in the article itself, certain catchwords, or key-words, which will serve as large pegs upon which to hang the threads of thought. For example, James Bryce wrote an exposition about the causes of migrations of men. His three key-words were *Food, War, Religion;* under each he grouped several kinds of migration. "Citizenship Duties" might be treated under the key-words *Community, State, National, International.* Look for these key-words. If the text

does not have them, supply them if possible from your own vocabulary, for the various divisions of the thought. Distinguish sharply between remembering key-words, and remembering the entire thought as expressed in the exact words of an author.

The key-words for "The Nature of Study," pages 21-31, are named below. See if you can remember and reproduce the various factors without referring to the article.

(1) Purposing
(2) Supplementing
(3) Organizing
(4) Evaluating
(5) Memorizing
(6) Utilizing
(7) Questioning

Have you ever had the experience of being alone in a large crowd, and then suddenly coming upon a friend? The warm feeling of pleasure that passes through you is said to be the "glow of recognition." During such a moment your mind is said to be especially ready to receive permanent impressions. Similarly, in recalling the parts of an article just read, if you can possibly have the glow of satisfied recognition in connection with the key-words, the probabilities are that you will retain the impression. This is really one reason why you can remember easily lessons in courses which you like heartily, while you remember with greater difficulty lessons in courses to which you are less devoted. When you enjoy a study, you have more opportunities for the glow of recognition so essential to permanent retention.

(*E*) *Repeat aloud what you wish to remember.* Many clergymen have testified that they usually fix their sermons in mind with their thoughts figuratively upon their prospective hearers. They say their outline aloud, or even repeat their entire sermons with the congregations in imagination before them. Say over to yourself what you wish to remember; say it for an object;

translate the thought into your own words, and it is likely to become established in your mind. Verbal reproduction is a highly important aid to memory.

(*F*) *Always make a final review.* You have all learned by experience one other practice which contributes to your skill in remembering a lesson: a vivid final review. Think a lesson through at night just before going to bed; then it will be clear and complete in the morning. This is especially true in your review if you imagine yourself responding to topics suggested by your teacher.

(*G*) *Plan a way to use the ideas in a problem of your own.* In all your work apply the knowledge, data, information, thinking, just as soon as possible to some problem of your own. Do something with it, tell it to a classmate, appropriate it for a conversation with a friend or an acquaintance. The best way to fix in mind a short story or anecdote is to use it. This is why our textbooks are nowadays arranged with problems at the end of each section. Mr. Whipple explains this principle:

In all your work apply your knowledge as much as possible and as soon as possible. There is scarcely any rule more fundamental than this one. To be sure to remember a thing, do something with it, try it, use it, put it into function, tell it to someone, go to almost any length to express what has been impressed upon you. All teachers know that they reach most complete appreciation and permanent retention of any topic when they have had occasion to teach it to others. The astounding grasp displayed by men in the learned professions over the thousands of intricate details of their callings is a consequence of the constant use they are making of these materials. Even so trivial an issue as the remembering of some good story is best met by telling the story to someone as soon as possible after hearing it or reading it. An excellent plan for any student who is anxious to master any topic is to seek to explain it to another person.[1]

[1]Used by permission from J. M. Whipple's *How to Study Effectively*, page 32. Copyright, Public School Publishing Company.

We have, then, seven principles to aid us in remembering and reproducing an author's thought:

(*A*) Begin with a strong determination to remember.
(*B*) Be sure that you understand the meaning.
(*C*) Notice carefully how major parts are related to each other.
(*D*) Locate or create key-words facilitating a glow of recognition.
(*E*) Repeat orally in your own words, with definite hearers in mind.
(*F*) Have a vivid final review.
(*G*) Tie up the material with some problem of your own.

CLASS ACTIVITIES

1. Using the Table of Contents on page 5, state the central idea of each of the major activities in the first four chapters of THE MIND AT WORK.

2. Again using the Table of Contents on page 5, discuss the relations of the first four chapters to each other; discuss the relations between the parts of Chapter One.

3. Read rapidly and silently the following selection, page 175. Write very lightly on the margins various key-words which you think will help you remember the article. Compare results, and select the best key-words.

4. Report to the class an instance in your school work in which you have definitely tried to apply any one of the principles developed in THE MIND AT WORK.

SECTION IV

REMEMBERING WHAT ONE READS[1]

CHARLES F. RICHARDSON

Reading Suggestions

(1) Which of the seven principles of reading to remember, page 174, are named by Mr. Richardson in the following article? As you come upon them, write down the points which he treats.

(2) Carefully notice the parts of Richardson's article which deal with sheer memorizing, repetition, and verbatim learning, and the parts which deal with the more general remembering and reproducing of thought.

(3) Pay especial attention to the "selective memory" as outlined in this article. You can fix the principle in mind by recalling a case of deliberate rejection on your own part of some portion of an article read. Possibly you can find in this very article a portion you will deliberately reject.

Scarcely anything is more annoying to readers than the fact that they forget so much of what they read. In history, dates and names pass from the mind; poems once known by heart fade away from recollection; and the characters, the plots, or perhaps the very titles of stories which were once familiar depart as utterly as though they had never been known at all.

In connection with this question of the retention or non-retention of what one reads, it should never be forgotten that the powers of the human mind are arranged in such a way that we must forget a great deal, however carefully we strive to remember all we can. A large part of our knowledge, too, is to be considered as an intellectual exercise; and we should no more

[1]Reprinted by permission from *The Choice of Books* by Charles F. Richardson. Courtesy of G. P. Putnam's Sons, Publishers, New York and London.

lament its loss than the fact that we do not remember what we had for breakfast a year ago today, or the exact length of the invigorating walk we took on that breezy morning week before last. Some books are by no means read without profit if a part, or even the whole, of them be forgotten beyond recall. And it is a consolation to reflect that the very best use to which some of our past reading may be put is to be forgotten as speedily as possible. If we have lost some things that were good and pleasant, we have luckily blotted from our minds not a little that was noxious and unattractive.

But after all reservations have been made, we should not forget the duty of remembering all we really ought to remember, so far as the natural powers of our minds permit. The first and the last aid to a memory is a habit of paying strict attention to what we read.

Special efforts should be made to retain what is gathered from reading (says President Porter[1]) if any such efforts are required. Some persons read with an interest so wakeful and responsive, and an attention so fixed and energetic, as to need no appliances and no efforts in order to retain what they read. They look upon a page and it is imprinted upon the memory. But there are others who read only to lose and to forget. Facts and truths, words and thoughts, are alike evanescent. We shall not attempt to explain here the nature of these differences. We are concerned only to devise the remedy; we insist that those who labor under these difficulties should use special appliances to avoid or overcome them. But that upon which we insist most of all is that what we read we should seek to make our own only in the manner and after the measure of which we are capable.

Dr. Porter then goes on to advise each reader to follow his natural bent and aptitudes; and not to worry, if he lacks a good verbal memory, over his inability to remember choice phrases or striking stanzas, nor to vex his soul over his failure to retain names and dates.

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[1] Dr. Noah Porter, formerly President of Yale University.

When a man reads (he says) he should put himself into the most intimate intercourse with his author, so that all his energies of apprehension, judgment, and feeling may be occupied with, and aroused by, what his author furnishes, whatever it may be. If repetition or review will aid him in this, as it often will, let him not disdain or neglect frequent reviews. If the use of the pen, in brief or full notes, in catchwords or other symbols, will aid him, let him not shrink from the drudgery of the pen and the commonplace book. But there is no charm or efficacy in such mechanism by itself. It is only valuable as a means to an end, and that end is to quicken the intellectual energies by arousing and holding the attention.

Hamerton has expressed an opinion that what is called a "defective harmony" is by no means an unmixed evil. He says there is such a thing as a "selecting memory, which is not only useful for what it retains, but also for what it rejects." What really interests us we can usually retain without recourse to any elaborate system of mnemonics.[1] That which does not properly interest us we cannot thus retain.

Had Goethe been a poor student, bound down to the exclusive legal studies which did not greatly interest him, it is likely that no one would ever have suspected his immense faculty of assimilation. In this way men who are set by others to load their memories with what is not their proper intellectual food never get the credit of having any memory at all, and finally come to believe themselves that they have none. These bad memories are often the selecting memories. They seldom win distinction in examinations; but in literature and art they are quite incomparably superior to the miscellaneous memories that receive only as boxes and drawers receive what is put into them. A good literary or artistic memory is not like a post office, that takes in everything, but like a very well-edited periodical, which prints nothing that does not harmonize with its intellectual life.

I fully believe in training and disciplining and developing the memory. But I also believe that the very essence of that training is the cultivation of a habit of friendliness, kinship, and

[1] *Mnemonics*: rules for improving the memory.

intimacy with the printed page. Mere mnemonic devices have been said to be like tying a frying-pan to one coat-tail and a child's kite to another. The true art of memory is the art of perceiving the relations and uses of things, not their external characteristics; and above all, not their artificial relations to some essentially foreign object or symbol. The purpose of memory is to help us; when a memory-machine fails to help us, and cumbers and overshadows that which it pretends to aid, it is worse than worthless.

Again, it should be kept in mind that no one brain has a right to tyrannize over another, or to lay down laws for it, in this matter of memory. For instance, a certain person remembers instinctively, and without effort, the name of the author, publisher, and printer of whatever book he takes in his hand, and also its size, shape, color of binding, and style of typography. Two or three readings of a college catalogue leave upon his mind the surnames, Christian names, and residences of a majority of the persons there recorded. Guidebooks and city directories are a rest and recreation to him; the names, locations, and pastors of the majority of all the churches in the cities he has visited are retained in mind without effort, and frequently, when visiting a town for the first time, this habit of memory leads him to be considered a local antiquary and specialist. Now, these memories seem so natural to him, and are acquired so absolutely without effort of any kind, that he can hardly understand why everyone else does not remember them equally well. But he has not the slightest right to prescribe a course of guidebooks, college catalogues, or city directories for others, any more than they have to demand that he recite Coleridge's "Ancient Mariner," or give the dates of the Third Punic War, or the signing of the Magna Charta, or Braddock's defeat, which he remembers with as much difficulty as any other reader.

In other words, no one has a right to insist that another person shall remember as or what he himself remembers. But it should always be demanded of every reader that he conscien-

tiously try to strengthen his memory by seeking to understand the nature and purpose of what he reads, its serviceableness to himself, and to the world through him.

This diversity of memories is admirably stated by Cardinal Newman.

We can (he says) form an abstract idea of memory, and call it one faculty which has for its subject-matter all past facts of our personal experience; but this is really only an illusion; for there is no such gift of universal memory. Of course, we all remember in a way as we reason, in all subject-matters, but I am speaking of remembering rightly, as I spoke of reasoning rightly. In real fact, memory, as a talent, is not one indivisible faculty, but a power of retaining and recalling the past in this or that department of our experience, not in any whatever. Two memories, which are both specially retentive, may also be very different. Some men can recite the canto of a poem, or a good part of a speech, after once reading it, but have no head for dates. Others have great capacity for the vocabulary of languages, but recollect nothing of the small occurrences of the day or year. Others never forget any statement which they have read, and can give volume and page, but have no memory for faces. I have known those who could, without effort, run through the succession of days on which Easter fell for years back; or could say where they were, or what they were doing, on a given day in a given year; or could recollect the Christian names of friends and strangers; or could enumerate in exact order the names on all the shops from Hyde Park corner to the Bank; or had so mastered the University Calendar as to be able to bear an examination in the academical history of any M.A. taken at random. And I believe in most of these cases the talent, in its exceptional character, did not extend beyond several classes of subjects. There are a hundred memories as there are a hundred virtues.

Phenomenal memory—the power to repeat a chapter after a single reading or a sermon after one hearing—is often associated with mental incapacity in other lines of effort. The ability to "quote poetry," or, in the exaggerated phrase, "to repeat all Shakespeare by heart," is of course a comfort in sleepless nights, or in travel, or in age. But, after all, there is no use in trying

to make one's head a reference-library for things that might as well be left between the covers of books. The selective memory, that adapts needed things to its own uses, is the best. Says the historian Rhodes of two self-educated Presidents, Andrew Johnson and Abraham Lincoln: "Johnson never mastered a book as Lincoln did the Bible and Shakespeare, weaving the substance into his mental being."

CLASS ACTIVITIES

Exercises to Be Worked Out in Class Discussion

1. You may have amusing class exercises by naming trivial memory devices like tying a string around one's finger. See how many are in the experience of the class. Richardson calls these "frying-pan and coat-tail mnemonic devices," page 178.

2. What "freaks" of memory, special kinds of memory, are known to your group? Can you match the case of a physician's wife who never forgets a telephone number?

3. How shall we apply the principle of selection, suggested by Richardson above, in determining what to remember of an author's thought? What will you remember from Richardson's article?

4. A good literary or artistic memory is not like a post office, that takes in everything, but like a very well-edited periodical, which prints nothing that does not harmonize with its intellectual life.

Is this statement true of other than "literary" and "artistic" memories?

5. What are the chief objections against cramming for an examination in the light of the cardinal principles of remembering and reproducing? How may a final review help establish relationships?

6. "Faint, glimmering, confused ideas will vanish like images in the twilight." Cite examples of ideas vividly grasped which persist in your memory, as contrasted with glimmering ideas which you once had in a dim way and have now forgotten. One example is the difficulty of recalling what someone has written about the style of a certain author, if you have yourself really understood the quality named.

7. Stop and recall what you have read during the process of studying. Close your book and strive to restate the main thought as the

writer has developed it; state the ideas again in terms of your own. Do not try to recall exact words. Carry through a class laboratory exercise using a part of one of the selections in the next chapter of this book.

8. It has been experimentally proved that the first repetition of anything to be memorized is by far the most important, especially if it is done very thoughtfully and analytically, with a definite intent to remember. You might try the experiment of reading a stanza of a few lines just once, with a strong determination to recall. Practice with these lines from Shakespeare:

> By Jove, I am not covetous for gold,
> Nor care I who doth feed upon my cost;
> It yearns me not if men my garments wear;
> Such outward things dwell not in my desires;
> But if it be a sin to covet honor,
> I am the most offending soul alive.
> *Henry the Fifth,* Act IV, Sc. iii.

9. Recall books to which you can apply the principle of selective memory, using Bacon's famous sentence, "Some books are to be tasted, others swallowed, and some few to be chewed and digested."

10. The wonder is not that we remember but that we should ever forget. Why?

11. An eminent French educator laid down as one of his principles: "What enters the mind alone, dies in the mind alone." What did he wish the reader to understand by this principle?

SECTION V

HOW TO HELP YOUR MEMORY[1]

ELMER B. BRYAN

Reading Suggestions

1. President E. B. Bryan of Ohio University explains that the ability to remember depends not primarily upon native or inborn power, but rather upon habits of work. While one cannot improve his memory, he can improve the use of his memory.

2. With this in mind, and desiring as you do to have the power of remembering what you study, look earnestly to see how Mr. Bryan makes the point: "Good holding depends upon good getting."

3. Be able to give an explanation with a concrete illustration from some of your own work, of "good getting" in one of your courses.

To get at anything like an accurate conception of memory, two facts at least need to be noted: *(1) People differ very greatly in their ability to recall isolated, disconnected events or things.* Some people with apparently little or no effort recall dates, places, names, and all kinds of disconnected matters. This is what Morgan calls Desultory Memory. Those who can remember in this way have always been able to do it; they have not acquired it. They do not know how they do it. There is no "how." If there were, it would no longer be Desultory, but would become Systematic Memory. The "how" makes it Systematic. It follows that Desultory Memory cannot, as such, be cultivated, for cultivation introduces a method, which constitutes it at once as Systematic and not Desultory. *(2) Memory is a resultant.* Memory is not positive in the sense that it is a

[1]Reprinted by permission from E. B. Bryan's *The Basis of Practical Teaching*, Chapter VII. Copyright, Silver, Burdett and Company.

faculty or an activity with which we do something. Memory is, to put it flatly, what happens because something else has happened. It is the answer, the fruitage, the resultant. Memory does not stand on its own feet, so to speak. It cannot in itself be cultivated. Memory training, at least, is a misnomer. Memory never has been trained and never will be trained. It is a resultant and not a process. In training children in accuracy and speed in addition, the training comes in the process of arriving at the answer and not in the answer itself. Individuals vary greatly in their power of retentiveness, due to difference in nervous plasticity, which cannot be changed.

The problem of good retaining for a given individual is nothing more or less than the problem of good getting. In general, good getting consists of two things only—*the application of the subject under consideration to all sides of the learner, and the application of all sides of the subject to the learner.* This principle must not be overlooked. Some subjects lend themselves to much more varied treatment than others. The wise teacher will see the limitations of each.

First, then, as far as possible, the subject should appeal to all sides of the student. Many city-born and bred children, while in school, know the definitions and uses of our common agricultural plants, and many of them know, in a general way, plant distribution throughout the world; but their information, if such it may be called, does not stick, and we say they do not *re*member well. Our diagnosis is wrong. They did not in the first place *member* [divide into parts] well. If the subject had been taught in such a way as to appeal to all sides of the pupil, he would not have forgotten it. He could not have forgotten it. If he could have seen, tasted, smelled, and handled these agricultural products, and actually have witnessed the use to which they could be put, if the processes of preparation had been adequate, the information would have stuck. He could not by any effort have forgotten it. And then we should say that he remembers well, which of course is true; but the large truth is

that he had *membered* it well in the getting, with the result that he could not forget it. Memory is a resultant. Good holding depends upon good getting.

Second, all sides of the subject under consideration should be presented to the student if we expect him to grasp it, and so retain it. The learner should see the thing in all its relations—the relations of place, time, cause and effect, whole and part. Much of the history work in schools, for example, is lost because each subject is taken up as a separate, isolated topic in no way related to what has gone before or to what follows; and then pupils are credited with having poor memories for history. We expect them to *re*member things which had never been *membered.* We expect them to hold things which they never had. We expect them to retain things which they had never attained.

As the Constitution of the United States is usually taught in our public schools, not one in a thousand remembers a single thing that is worth while. He has not known anything worth while. He may have committed the document to memory as he would a declamation, but that is far from knowing it. To know a thing is to get it in its relations. What were the forces which made the Constitution, and what the forces which it made? What was peculiar to the place and time which made it practically inevitable? Of what larger movement is it a part and what are the important parts or phases of it as a movement?

A presupposition for remembering the Constitution is that it should have been known, and a necessary condition for knowing it is that it should have been seen in its relations. All sides of it should have appealed to the learner. The Constitution must be seen as the general instrument of government resulting from hundreds of years of conflict and development. In it must be seen the old navigation laws, the Stamp Act and its repeal, the Mutiny Act, the Colonial and Continental Congresses, the Boston Tea Party, the Boston Massacre, Lexington and Concord, Bunker Hill, the Declaration of Independence, the Articles of Confederation, the numerous attempts to remodel the Articles, Valley

Forge, the surrender at Yorktown. Unless these things can be seen as contributing finally to this result, the spirit and genius, and therefore the significance, of the Constitution are lost; it is not comprehended and so is not retained.

And likewise the significance of the Constitution cannot be comprehended unless we know it as the instrument of government under which our history as a nation has been made. The questions which have arisen in our national history are to be determined in the light of this general instrument of government, and the Constitution itself can be understood only as we see its mark upon all important questions of state since its adoption. The only way to know a law fully is to make it operative. So it is with the Constitution, the general law of the land. It not only stands as the great generalized effect of the years that had gone before, but it stands out as the great semi-cause of the events which followed. The Kentucky and the Virginia Resolutions, the Hartford Convention, the Missouri Compromise, the Monroe Doctrine, the Acts of Nullification, the Wilmot Proviso, the Omnibus Bill, the Kansas-Nebraska Act, the Dred Scott Decision, the Act of Secession, Reconstruction, the Income Tax, are all constitutional questions, and no one can know the Constitution who does not see its marks on all such questions.

This illustration has been given thus fully, not as a lesson in history, but in order to show what is meant by presenting a topic in its relations. The purpose is to illustrate one phase of memory, viz., that good holding depends upon good getting; and that one phase of good getting consists in presenting to the learner the subject under consideration in as many of its relations as possible.

Other things being equal, vividness, recency, and repetition in presentation strengthen retention. Through vividness, one remembers his first sunset at sea. The emotional tone was such that the experience burned itself in at once, never to be lost—because of the way in which it was obtained. Recency is an

important factor only in that things have not had time to fade out since their acquirement, and repetition means nothing more than getting the same thing over and over again.

If good getting, full comprehension, is the secret of good retention, it becomes apparent at once how important it is that the avenues for the transmission of the raw stuff of information should be kept in their normal state. The learner's eyes and ears should receive special care, for these are fundamental; they are the presuppositions of all intelligence.

CLASS ACTIVITIES

Problems for Class Work

1. Approach something you need to remember from several different angles. For example, the seven factors of study as set forth by McMurry in Chapter I are these: purposing, supplementing, organizing, evaluating, memorizing, utilizing, questioning.

(*a*) Write out the meaning of each; then, if you feel the need, turn back, reread McMurry's article (page 21), to verify or correct your definitions. You have approached the problem of remembering from the viewpoint of *review*, or stating in your own words in written expression, and of verification by rereading.

(*b*) Think now of the story of investigations of yellow fever as told by McMurry: the need, the experiments, the hypothesis, the testing, the results. Try to substitute the story of some other scientific investigation in each of the respects related by McMurry. Recall that the yellow-fever story illustrated at least some of the factors of study. You have approached the meaning of some of the factors of study from the viewpoint of *exemplification*.

(*c*) Think now of your original estimate of your own ability as a student in the light of McMurry's seven factors. Where were you weak and where strong? You have approached the meaning from the viewpoint of *application* to yourself.

2. It will be easier to approach from several angles another set of facts which needs to be remembered. Take the Lincoln "Gettysburg Address," which you probably already know by heart. Apply Mr. Bryan's principle of "right getting" by approaching from several angles, and by thinking about the meaning of the passage.

(*a*) The historical setting: place, time, immediate event, audience.
(*b*) Preparation: how made, where.
(*c*) Comparison: with Edward Everett's two-hour address on the same occasion; with the second inaugural address.
(*d*) Thinking about significant phrases: "conceived in liberty," "all men created equal," "government *of* the people, *by* the people."
(*e*) Story of the great Civil War crisis at Gettysburg, said to be the turning point of the war.
(*f*) How long the war lasted after the address.

3. Prepare a similar plan of approaching from several points of view a problem of your own in science, in civics, or in English literature.

4. Tell about an event or series of events in history which you *re*member well because you "membered" it thoroughly, as Mr. Bryan suggests.

5. On the basis of these exercises hold a class discussion upon the topic: "Good getting helps good keeping in our school work."

Problems for Work in the Classroom

1. Prepare for a class test in memory. Choose a stanza of about eight or ten lines. Let each try carefully to recall it after three readings. All may close books and write. Those who fail should read the stanza again; then write. See how many of you can be perfect after five readings, with appropriate writing attempts.

2. Let all learn a stanza. At some unexpected time a few weeks later, let the class write the stanza from memory. Compare results.

3. What is the chief value of "outlining" a chapter which you need to master? Work out on the board an outline of one of the earlier selections in this book.

4. A class committee may find two passages of about equal difficulty, make a careful outline of one on the blackboard, and read the two passages to the class, giving the listeners a chance to study the out-

line of the passage first read, but no opportunity to see an outline of the second. Test your memory of the two passages two or three days later.

5. Give data from your school life showing that what you remember in one study helps you remember in a second study. Indicate the importance of this fact in your work as students.

6. A narrative is relatively easy to remember because the incidents of the story grow out of each other; each is tied up readily with the preceding. On the contrary, an explanation of a science problem or of civic duties is harder to remember because the parts are not related in "story" sequence. A narrative poem is easier to learn by heart than a descriptive poem. Tell about concrete experience from your school work to support these statements and to drive home the truth that remembering depends upon seeing the relationship of ideas.

7. A good speaker always bears in mind the fact that the average listener can remember only a few points. He uses great care in organizing his talk around one, two, or three major ideas, depending on the time at his disposal. These carefully selected major ideas are the most important elements of his thinking that he wants his hearers to remember. His skill can be measured further by the force of the illustrations or the concrete material he uses to drive home each of his major ideas. Apply these two tests to an address in your school assembly. Apply them to the next topical recitations in any of your courses. Make oral or written reports of your observations as directed.

8. Select a chapter from one of your textbooks in history or in social science. Set aside one class period for intensive application. Apply these principles: (i) Resolve to remember the essentials, (ii) Pause to understand each, (iii) See how they are related to each other, (iv) Say each aloud before you leave it, fixing a catchword in mind, (v) Apply the points to current problems, (vi) Finish with a vivid final review, closing your books. Possibly your class can plan a laboratory exercise for the English period of one day, and test the value of the work on the following day. All would need to make it a point of honor to refrain from studying or talking of the lesson outside the class period.

9. Better remembering by better thinking. As to the memorizing of facts by actors, Professor James says:

> What it has done for them is to improve their power of *studying* a part systematically. Their minds are now full of precedents in the way

of intonation, emphasis, gesticulations; the new words awaken distinct suggestions and decisions; are caught up, in fact into a preëxisting network, like the merchant's prices or the athlete's store of records, and are recollected easier, although the mere native tenacity is not a whit improved, and is usually, in fact, impaired by age.

It is a case of better remembering by better thinking. Similarly when schoolboys improve by practice in ease of learning by heart, the improvement will, I am sure, be always found to reside in the *mode of study of the particular piece* (due to the greater interest, the greater suggestiveness, the generic similarity with other pieces, the more sustained attention), and not at all to any enhancement of the brute retentive power.[1]

How does this statement bear out the central theme of the present chapter?

10. Mark Twain says that a "freak" memory is a great misfortune. "To it all occurrences are of the same size. Its possessor cannot distinguish an interesting circumstance from an uninteresting one. Moreover, he cannot stick to his subject. He picks up every grain of memory he discerns in his way and so is led aside." Can you cite cases of freak memories which illustrate Mark Twain's point?

11. To associate the new ideas which one is trying to remember with old ideas already well established in his mind is the very essence of effective remembering. For example, several literary people were born in the year 1809; among them, Elizabeth Barrett Browning and Edgar Allan Poe. Assume that this fact is fixed in mind. Then, if one is trying to recall the date of Tennyson's birth, finding that it is 1809, he immediately associates the three poets in the respect named. In this case the association is very close indeed, and memory of 1809 is probably fixed permanently, especially if he recalls that 1809 is the date of Abraham Lincoln's birth.

Association may be fixed also by contrast. Suppose that you know the characteristics of Poe's poetry. Upon reading Tennyson's, you find fundamental differences and dwell upon them in your own thought, using your estimate of Poe as a contrasting standard. The memory of each poet's work is likely to be strengthened. Can you illustrate this by citing contrasts between any two poets you have been studying? All your studies in school should furnish abundant illustrations of this essential feature of memory. Discuss examples.

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[1]Used by permission from William James's *Principles of Psychology*, Vol. I, page 66. Copyright, Henry Holt and Company.

12. Let each student bring to class a cartoon or an illustration from an advertisement about something worth remembering. Have someone show them all to the group. Decide which three are most likely to help readers recall. Select also the ideas represented most worthy of retention. It often happens that worthy ideas are much less effectively presented than far less worthy ideas.

Topics: Five Minute Talks

Plan a three to five-minute talk upon one of these topics:

1. A bright colored "bauble" that sticks in my mind.
2. The things I remember without effort.
3. Interesting "memory devices."
4. When thinking aided my memory.
5. A "freak" memory I know about.
6. The value of "key words" in remembering, exemplified.
7. When I received a vivid first impression.
8. When I was helped by tying up a lesson with some experience of my own.
9. An annoying "lapse" of memory.
10. An humiliating experience of learning words rather than ideas.
11. A name or a place or a date that persists in my memory. Why?
12. Why "power" rather than "knowledge" is the goal of our study.
13. Knowing, but unable to recall; an example.
14. A memory "association" that never failed me.
15. Key words for a recent lesson or for a lesson of the immediate future.
16. Selecting what to remember vs. trying to remember everything. Explain.
17. A memory that is filled with useless "junk." A piece of "junk" in my own mind.
18. A "post-office" memory vs. an "edited periodical" memory.
19. "Membering" well in order to remember well.
20. Diagrams that helped me to remember.
21. Recall a cartoon that you have admired. Tell why you remembered it.
22. Approaching a memory problem from two or three different angles.
23. When a good "forgettery" was an asset.

ADDITIONAL READING PROJECTS

1. "Reading," John Adams, *Making the Most of One's Mind,* Chap. VI. Shows the relation between slow and rapid reading and points out when each is appropriate.
2. "On Skipping," Thomas L. Masson, *The Bookman,* Vol. 51, page 426. Satire on very deliberate reading. Amusing imaginary conversation of one who pretends he has read, but has not.
3. "Learn When and How to Read Rapidly," R. L. Sandwick, *How to Study,* Part I, Chap. IX. Discusses the knack of rapid reading with admirable summary of principles.
4. "The Art of Skipping," C. F. Richardson, *The Choice of Books,* Chap. X, page 119. "The whole secret lies in a single word—selection."
5. "High Points on a Reader's Path," W. P. Eaton, *The Bookman,* Vol. 49, page 641. Reading experiences of a literary artist. Compare with Roosevelt, references on page 167, and Wilson, No. 6, immediately below. Here is the basis for an excellent group project in such comparisons.
6. "Books as a Mental Diversion," C. T. Grayson, *The Bookman,* Vol. 52, page 291. Account of Woodrow Wilson's habits of reading for business and for recreation.
7. "How Much to Read," C. F. Richardson, *The Choice of Books,* page 58. Why spend time with good books?
8. "The Evolution of the Book," Lucy E. Fay and Annie T. Eaton, *The Use of Books and Libraries,* Chap. XII. Interesting story of the development of books.
9. "Nine Points about Reading," Arnold Bennett, *The Bookman,* Vol. 48, page 763. Choosing books, reliable information about them, wide reading, reading within certain dates.
10. "Memorizing as a Fifth Factor in Study," F. M. McMurry, *How to Study,* Chap. VII. Easily understood discussion of the factors of remembering.
11. "Aids to Memory," H. D. Kitson, *How to Use Your Mind,* Chaps. VI and VII. Clear and simple explanation of remembering.
12. "The Memory and Thinking," N. G. Schaeffer, *Thinking and Learning to Think,* Chap. XI. Mechanical memory and analytical memory.
13. "Manipulation of the Memory," John Adams, *Making the Most of One's Mind,* Chap. III. Explains in simple language with easily understood illustrations how one may improve the use of his native powers of memory; the objections to "learning by heart"; the explanation of "special" memories.

14. "The Factors Which Influence Memory," Henry J. Watt, *The Economy and Training of Memory,* Chap. IV. See Chap. VII for excellent principles of using the memory well.

15. "Memory and Note-Taking," H. L. Koopman, *The Mastery of Books,* Chap. VI. The conditions of memory.

16. "Begin by Recalling What You Know," R. L. Sandwick, *How to Study,* Chap. IV, page 28, and Chap. VII, page 42. Begin the learning process by tying up what you study with what you already know.

17. "Memory and Imagination," E. H. Cameron, *Psychology and the School,* Chap. VI. Simple and direct discussion; one of the best chapters for senior high-school students on the nature and effectiveness of recall.

18. "In the Wonderlands of Memory," Hallam Hawksworth, *The Workshop of the Mind,* Chap. II. This Chapter will be especially helpful to one who thinks that he has a poor memory.

19. "Memories," A. S. Edwards, *Fundamental Principles of Learning and Study,* Chaps. 10-11, pages 117-142. The modern idea of memory.

CHAPTER FIVE

Reading as an Active Process

Reading is a copartnership. What we receive from it is in the nature of dividends on a joint investment.

—Kerfoot.

SECTION I

SUPPLEMENTING AN AUTHOR'S THOUGHT

Earlier chapters have developed the necessity of reading with objectives or purposes in mind; have explained the necessary types of skill which a good student employs in grasping the author's main idea and its various subdivisions; and have indicated skills important in remembering and reproducing thought. The present chapter turns to still another essential feature of the habits of a capable worker. We are to consider the reader's duty of helping the writer by "supplementing the thought," as McMurry says (page 25).

In forcible words, Ruskin has pointed out the intensely active side of reading:

And be sure, also, if the author is worth anything, that you will not get at his meaning all at once—nay, that at his whole meaning you will not for a long time arrive in any wise. Not that he does not say what he means, and in strong words, too; but he cannot say it all, and what is more strange, will not, but in a hidden way, and in parable, in order that he may be sure you want it. I cannot quite see the reason of this, nor analyze the cruel reticence in the breasts of wise men which makes them always hide their deeper thought.

They do not give it you by way of help, but of reward, and will make themselves sure that you deserve it, before they allow you to reach it.

But it is the same with the physical type of wisdom, gold. There seems, to you and me, no reason why the electric forces of the earth should not carry whatever there is of gold within it at once to the mountain tops, so that kings and people might know that all the gold they could get was there; and without any trouble of digging, or anxiety, or chance, or waste of time, cut it away, and coin as much as they needed. But Nature does not manage it so. She puts it in little fissures in the earth, nobody knows where. You may dig long and find none; you must dig painfully to find any.

And it is just the same with men's best wisdom. When you come to a good book, you must ask yourself, "Am I inclined to work as an Australian miner would? Are my pickaxes and shovels in good order, and am I in good trim myself, my sleeves well up to the elbow, and my breath good, and my temper?" And keeping the figure a little longer, the metal you are in search of being the author's mind or meaning, his words are as the rock which you have to crush and smelt in order to get at it. And your pickaxes are your own care, wit, and learning; your smelting furnace is your own thoughtful soul. Do not hope to get at any good author's meaning without those tools and that fire; often you will need sharpest, finest chiseling and patientest fusing before you can gather one grain of the metal.[1]

Another powerful statement of the contributive activity of a good reader is found in an interview which Edward Bok reports that he had while still a boy with the great preacher Phillips Brooks. Bok, left alone in Mr. Brooks's library, had been gazing with respect upon the many books he saw about him. When Mr. Brooks returned, he said:

"I am glad you had such respect for my dumb friends [his books]. For they are my friends, each one of them," he continued as he looked fondly at the filled shelves. "Yes, I know them all, and love each for its own sake. Take this little volume," and he picked up a little volume of Shakespeare. "Why, we are the best of friends; we have traveled miles together—all over the world, as a matter of fact. It knows me in all my moods, and responds to each, no matter how irritable I am. Yes, it is pretty badly marked up now, for a fact, isn't it? Black; I never thought of that before, that it doesn't make a

[1]From *Sesame and Lilies*, pages 53-55, J. W. Linn, Editor. Lake English Classics, Scott, Foresman and Company.

book look any better to the eye. But it means more to me because of all that penciling.

"Now, some folks dislike my use of my books in this way. They love their books so much that they think it nothing short of sacrilege to mark up a book. But to me, that's like having a child so prettily dressed that you can't romp and play with it. What is the use of a good book, I say, if it is too pretty for use? I like to have my books speak to me, and then I like to talk back to them.

"Take my Bible here," he continued, as he took up an old and much-worn copy of the book. "I have a number of copies of the Great Book: one copy I preach from; another I minister from; but this is my own personal copy, and into it I talk and talk. See how I talk," and he opened the book and showed interleaved pages full of comments in his handwriting. "There's where St. Paul and I had an argument one day. Yes, it was a long argument, and I don't know who won," he added smilingly. "But then no one ever wins in an argument, anyway; do you think so?"[1]

Mr. Brooks's debates with St. Paul on the margins of his Bible probably consisted largely of the fourth or the fifth type of marginal comments suggested by Hall-Quest in the quotation which follows. Hall-Quest says that the margins of a book one owns have a double purpose. They are generally included in printed material for esthetic reasons and for the necessities of the printing press. In addition, he indicates that they should serve as the depository of a certain share of the reader's contribution to the reading process. He refers to such comments as Mr. Brooks wrote on the margins of his Bible in his debate with St. Paul. Hall-Quest's suggestions about the nature of marginal notes in textbooks are these:

First, the summary of each paragraph. If the pupil is trained to write along the side of each paragraph a brief summary of its main thought, he will save much time in his studying.

Second, references to related material in the same book or elsewhere.

Third, questions that arise during the reading and that must be jotted down at once lest they vanish.

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[1]From *The Americanization of Edward Bok, An Autobiography,* pages 48-49. Copyright, Charles Scribner's Sons.

Fourth, criticisms of the author's thought, points of view different from the author's, the pupil's fresh reaction to the subject-matter.

Fifth, new thoughts, suggestions, large questions that are destined, perhaps to stimulate the young man or young woman into serious plans of great living.[1]

It is appropriate to speak of three types of supplementing skill in performing the reader's share of the reading process.

(*A*) *Keep the mind alert, constantly asking questions of the writer.* Of course, we do not mean petty questions like "Why did you write this stuff?" or "How old were you when you wrote?" We have in mind, rather, vital questions like these: "How does the point you are now making tie up with the preceding?" "What does it add to your central idea?" "What proof or illustration will you advance to make good the general statement you have just made?" "How will you surmount this difficulty, Mr. Blank?"

To be more specific: We might indicate the two types of questions in reading the first division of Mr. Foster's "Should Students Study?" in Chapter I. Read the first page of Mr. Foster's article, page 36.

PETTY QUESTIONS	VITAL QUESTIONS
1. Where is the University of Wisconsin?	1. Does it make any difference that the best high-school students go to college in larger numbers than the poor?
2. Did anyone ever go over Niagara in a barrel?	2. Is the number "nearly 500" representative of Wisconsin students?
3. Why did The University of Chicago make exceptions?	3. No indication is given of the number of students in the Chicago investigation. Why? Isn't this important?
4. Why don't you consider the college in my state?	4. Mr. Foster, ought I to be willing to take your statement about Reed College without hesitation?

[1]From A. L. Hall-Quest's *Supervised Study,* page 170. Copyright, The Macmillan Company.

In all probability a reader would not ask Mr. Foster so many even of the vital questions. Nevertheless, he should anticipate certain very important matters upon which he has a right to expect information. In an article which urges him to purchase a set of books, or to support extensive civic improvements, or to attend a well-known college, the reader has a right to ask about the recency of the books, or the cost of the improvements, or the housing conditions of the college.

A word of caution is in place here, suggested by the statement of a student who was being trained to ask questions of books. He said, "I am always so busy asking the questions you advise that I forget what I am reading." Exactly. He was probably not distinguishing between futile questions and vital questions. And of the latter, he was probably asking too many.

(*B*) *Help the writer by recalling experiences of your own which corroborate his statements.* Doubtless you did exactly that when you read Dewey's article describing the five steps in reflective thinking, or Mr. Foster's "Should Students Study?" Mr. Dewey tells of being far from his destination, with a limited time to keep an appointment, and of various alternatives that suggested themselves. You may never have been in a situation in New York City exactly identical with that reported by Mr. Dewey; but you, like other human beings who regard engagements as important, have been in somewhat similar situations of possible tardiness. As you read about Mr. Dewey's predicament, your own similar experience flashed through your mind. "Yes, that is so," you said. In like manner, when Mr. Foster told you of the success or failure of high-school students on the basis of scholarship, you did not know personally any of the people to whom he referred. But you were thinking, "in the back of your mind," as we say, of your own acquaintances whose experiences, you know, corroborate Mr. Foster's conclusions.

In this connection, it is pertinent to note how much can go on in the back of an active mind in very brief flashes. You did not think out in full your own experience of anticipating tardi-

ness when you were reading Mr. Dewey's predicament of the same kind. You had merely a flash of memory—late for the party—ten minutes to get to school—the missed rehearsal. While you were reading of good scholarship in Mr. Foster's article, you may have thought of certain of your schoolmates momentarily: "That's John," or "Mary, for all the world," you thought as you read on. Thus we see that the process of reading is an active contributive process, in which the reader supplies data out of his own life and thinking. And these data flash through the reader's mind in extremely abbreviated form. Very frequently, it is a good plan deliberately to stop reading when, in your studying, a flash of thought thus comes to your mind, and to give that supplementing thought a free chance to develop as far as it will.

(*C*) *Help the writer by thinking of examples of your own which differ from those he writes about.* Contrast is a very effective method of bringing out meaning. This is particularly true in much of your reading that has to do with geography or community life, civics, and history. Suppose, for instance, you have lived all your life in the Mississippi Valley. With the topography, the industries, the transportation, and the products of at least a small portion of this region, you are familiar. When you read of the geography of Norway, of Switzerland, or even of our Rocky Mountain states, you understand the details better because, almost unconsciously, you are supplying the writer with a background of knowledge which furnishes a sharp contrast with what he is saying. So, too, in reading about life in the slums, perhaps in that excellent book of Jacob Riis's, *How the Other Half Lives,* you helped the writer by furnishing contrasts from your own comfortable homes, and clean parts of your city.

Of course it is quite possible to help the writer by recalling both differing and similar experiences. You may have been in a position to witness scenes similar to those he describes, and at the same time may have in your own life a startling contrast of conditions. If so, you are a good reader in this respect at least;

and the more supplementary experience you have to draw upon, the better reader you are. Indeed, one of the very best tests of effective reading is to be able, when you have finished, to repeat the general thought of the writer, and to supply the data for your report, not from the pages of his book, but from your own experience.

It would be very natural to use the idea, "recalling differing experiences" as a means of perpetually finding fault with the writer's conclusion. One should not be a ferret, prying curiously into various paragraphs to find something to seize upon; he should, none the less, be a cautious reader. If some writer, especially in the public press, makes a statement which recalls to you no corroborating experiences, but on the contrary, suggests many experiences which have a radically different meaning, it is your business as a good reader to question his statement. Indeed, if the conflicting or contradicting data you possess from your own life are ample and strong enough, as a good reader you should either hold the question unsettled or entirely reject the statement.

One by-product of the main idea in this discussion may be expressed as another word of caution: a reader or listener must not allow his mind to go wandering off so far on a tangent, upon some line of thinking, fancy, or mere daydreaming, that he loses the thread of the discourse. When suddenly he comes back to the present he is lost, having missed the intermediate parts. To be sure, "woolgathering" is not quite so harmful in reading as it is in listening. However, it may cause great waste of time. In the article of Kerfoot, which follows in this chapter, there are many little human touches such as "we scuttle down the darkened aisle [of a movie theater] and slip into some vacant seats," "like the jerking of a burned finger out of a flame," "prejudices that we failed to rid ourselves of." Upon any one of these side lines a reader might let his mind run off at random, especially if he has just had an amusing experience finding seats, or a bitter experience with a burn in the laboratory, or if he has a prejudice that

will not down. Instead of dwelling on any such point, a flash should shoot through the reader's mind, like the flutter of a picture on a reel through the motion-picture machine. These brief flashes do not distract us from the forward movement of the thought or the main idea developed.

An intelligent reader or listener holds his attention firmly upon the ideas presented which are in line with the central theme of the writer or speaker. His developed skills enable him to separate the vital from the relatively insignificant points. He is even able to neglect a part of the subordinate points, using the time to dwell upon the meaning of the significant. In contrast, an unintelligent listener allows his mind to ramble off upon a side line, and becomes lost in vague and purposeless reverie, as he permits his attention to be directed with equal intensity to the relatively unimportant details and to the absolutely indispensable matters.

We are, then, to develop our powers as readers by thinking of our duties as active partners of the authors whose books we read. Our share of the joint investment is liberal contributions from our own experiences. We may profitably ask of our partners pertinent questions and then look for their answers; we may summon from our own mental stock data which support and data which oppose their views. The dividends we are to reap depend to a very large extent upon what we do *to* and *with* the materials which writers place before us.

SECTION II

LEARNING TO READ[1]

J. B. Kerfoot

Reading Suggestions

1. The following article by Mr. Kerfoot is a chapter from *How to Read,* a book which you will enjoy in its entirety. After you have read the chapter given here, go to the school or city library, and try to secure the book, if it is not in your classroom. Possibly your English instructor will allow you to substitute it for one of your required home-reading books.

2. Recall the principles of reading, and apply them consciously to this article: (*a*) read with a purpose, (*b*) grasp the author's thought. (*c*) remember the leading thoughts, (*d*) supplement the author's thought.

3. Before you begin to read, write from memory the five skills for grasping the writer's thought, the three skills for remembering, and the three skills for helping the writer. If you cannot recall the various skills, consult pages 159, 171, and 196 ff. When you have finished the reading of Kerfoot's article, check the skills on your list which you are sure you employed.

4. Recall the kinds of reading as explained in Chapter One, Section 1, page 14, and see if you can anticipate an answer to Mr. Kerfoot's question, "When did you learn to read?"

I

A few months ago I happened to be present at a dinner where a chance question led to an interesting talk. Some phase of primary education was under discussion; and in the course of it the host, turning to one of the guests, asked, "When did *you* learn to read?"

[1]From J. B. Kerfoot's *How to Read,* Chapter I. Reprinted by special permission of, and by special arrangements with, Houghton Mifflin Company.

"At three," was the prompt reply, given with a touch of pride.

"And you?" said the host to the next guest.

"Oh, I don't know. About five, I suppose."

"And you?" to a lady beyond.

There was a moment's embarrassed hesitation. And then, with something about scarlet fever, came the confession that she had not learned her letters till she was nine.

And thus it went, halfway round the table.

Now these replies were direct and pertinent answers to a technical question. Taken separately, they gave the exact information asked for.

And yet, as they piled up, one after the other, there seemed to be something about them that I found myself vaguely resenting.

It was not what they said. It was, rather, a discernible common denominator of implication in their manner of saying it.

It seemed as though these people were leaving out of account all the other-than-technical meanings of the phrase with which they dealt, not because they were consciously excluding these deeper meanings for the moment, but because they unconsciously ignored them at all times.

There was a cumulative inflection of finality in their declarations. It almost sounded as though, in dealing with the primary-school meaning of "learning to read," they felt that they had dealt with the *whole* meaning of that expression. And while it never entered my head at the moment that this was really true, the fact that it was somehow being made to appear true struck me as amusing. It struck me as amusing enough to call attention to. And so, presently, when the host asked me when *I* had learned to read I answered with a smile that I was still learning.

And to my utter astonishment it developed, in the chaffing and talk that followed, that no single member of that largely literary and more or less intellectual company had ever thought of the expression "learning to read" as *having* any other mean-

ing than the technical, primary-school meaning; that, namely, of learning the alphabet, learning to recognize words made out of the alphabet, learning the dictionary meanings of more, and more, and still more words, and thus learning to *receive messages sent by print or handwriting.*

No one of them, it turned out, had ever asked himself what it is, exactly, that we do when we read. No one of them had ever watched himself in the act of reading. And all of them, in consequence, had retained intact the careless assumption that reading is essentially a *receptive* process. They all looked upon it, let us say, as though print were a sort of silent telephone, into the end of which an author delivers a message, and from the other end of which (by simply "knowing how to read") his audience receives it.

Now, as a matter of fact this is not true at all. It is not even an inadequate statement of the facts; it is a misstatement of them. And when I had pointed out something of this—when I had, hurriedly, and to the poor best of my surprised unpreparedness, mobilized a few arguments and illustrations in defense of what I had regarded as an axiom—we began, in the course of the give-and-take of the talk that followed, to make discoveries. And we continued, excitedly and joyously, to make them until 1:00 A. M.

We discovered that the common-school definition of "learning to read" is so universally accepted as the whole definition, that, while almost every newspaper and magazine publishes regular articles on *what* to read, none of them, so far as any of us knew, ever publishes articles on *how* to read. We discovered that, while there is a whole literature of books about books—about what books it behooves us to read, and why it behooves us to read them, and what (according to the author) it behooves us to read into them—there is little or nothing in the whole literature about literature that tells us anything at all about how we *have* to read books and what it is that we *have* to read into them.

We discovered that reading, so far from being merely a receptive act, is a creative process; that it is "creative," not simply in the more or less cant-sodden "artistic" sense, but in a biologic sense as well; that it is an active, largely automatic, purely personal, constructive functioning; that it is, indeed, a species of anabolism.[1] In short, that it is *a form of living.* And as this last expression will be found, as we proceed, progressively to absorb and adequately to sum up the essence of our successive conclusions, I will put it that it is this last "discovery"—the discovery of reading as a form of living—that I propose to examine and hope to elucidate in the following pages.

And now, having said this much by way of introduction—having, as it were, established a mental take-off—let us, like sensible swimmers, dive at once into the deepest pool that our preliminary subject affords.

II

Until ten or twelve years ago, no man who ever lived could tell another man a story.

From the beginning of time, right down until about ten years ago, no man ever lived who could tell another man a story. Moses couldn't. Homer couldn't. Chaucer couldn't. The minstrels and minnesingers couldn't. Dante couldn't. Dickens couldn't. Even Conan Doyle couldn't.

The best that the very best of them ever succeeded in doing was to trick, or to coax, or to compel their readers or their hearers into *telling stories to themselves.*

"Pshaw!" you are very likely going to exclaim at this point. "Here is a man pretending to explain one idiotic statement by making another." And perhaps it does look that way. But, before we continue the discussion, let us take a few minutes off and go to the movies.

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[1] *Anabolism:* a process of building up.

III

That stirring photo-play "The Two Rattlesnakes" is on the bill.

We scuttle down the darkened aisle and slip into some vacant seats near the front.

There is a little hissing splutter overhead. A flickering green frame, with "Jim Meets a Rattler" inside it, springs into view on the dim curtain. And a moment later the entire audience, and we with them, have settled down into an eager, yet perfectly passive, receptivity, and are looking (through a hole in the darkness) at the arid slope of an Arizona sheep-ranch, where a cowboy with a lamb in his arms and an old ewe at his heels is picking his way down the rocky and cactus-grown hillside. On he comes, twisting and turning; near enough now for us to see the litheness of his limbs and his cheery eyes. Then, suddenly, there is a blur of motion at his feet. A snaky something launches its length and strikes for a second at his knee. Bewilderment, horror, realization, chase each other across his face. We see him drop the lamb; snatch out a knife; rip away the cloth, slash the naked flesh; bend to suck the poison from the wound. We watch him make a tortion bandage from the kerchief at his neck. We watch him start, limping, down the hill. We watch him waver, and stumble, and stop to rest with his hand on a bowlder. We watch him press on; and fall; and get up; and struggle on again. We see him fall, and fail to rise. We see him, with a last spurt of strength, pull his six-shooter from its holster; fire three slow shots in the air; and drop back into unconsciousness. And we see a little cloud of distant dust turn into the mounted figures of his friends; see them ride furiously up; leap to the ground; gather round him; examine his hurt; lift his inert body to a horse's back, and ride away—just as the hole in the darkness disappears and we find ourselves back again in the dim-lit, crowded hall.

IV

Do you happen to know how the movies are made?

They begin, like any other piece of fiction, in the mind of a man who has *told himself a story.* Having done so, he undertakes, by means of a short piece of descriptive writing (called a scenario) to guide the imagination of his readers along the road his own imagination has followed. And this scenario is submitted to a movie manager, who, if he likes it, buys it and turns it over to his producing department.

Now the producing department of a moving-picture concern is a remarkable establishment. It has a long list of actors at its beck and call. It has storehouses full of stage properties. It has clothespresses full of costumes. It has a card index of "likely places." It has a corps of mechanics to do its bidding. And when the scenario of an author's story is turned over to the directing intelligence of this establishment, he chooses actors for it from his troupe. He supplies them with costumes from his cupboards. He draws stage properties from his stores. He selects scenes from his card index. He has his mechanics provide effects that are not in stock. And finally, before the recording eye of the camera, he proceeds—well or ill according to his ability and his resources—to *retell the author's story in the concrete terms of his own equipment.*

And for us who sit in the audience his retelling—his reading of the story—is final. You may know a hillside far more picturesque than the one Jim comes down. But you cannot substitute it, in your mind, for the movie-man's hillside. The movie-man is reading the author's story, not we. For the moment he stands, like St. Peter, at the gates of our imaginations. What he chooses is chosen. What he puts in is in. What he leaves out is out.

He is the first man who has told another man a story since the world began.

"But," you are perhaps exclaiming, "how then about the others? How about Virgil? And Cervantes? And Balzac? And—Marie Corelli?"

Every one of them, from the least to the greatest, has but written for the movies.

Not for the movies of the photo-theater, but for the movies of our minds.

For a novel is nothing but an elaborate scenario. And each of us is a moving-picture concern.

When we examine a book at a bookstore; when we look at the opening sentences, and read a snatch of conversation on page 247, and turn back to the last page to see how it all ends—a scenario has been submitted to the manager. When we pay down our $1.35, or present our library card to be stamped, we have purchased the local rights in it. And when we switch on our electric reading-lamp, and stretch out in our favorite chair, and open the book at the first chapter, we turn the tale over to our producing department.

And the producing department of a human moving-picture concern is also a remarkable establishment.

All the people we have ever known, plus thousands we have spoken to, or crossed eyes with in a crowd, or watched in public places, or merely glimpsed in passing, are actors at its beck and call. And it can, moreover, pick and choose, not only among these actors, but among their attributes. It can, and that in the twinkling of an eye, take a chance expression on the face of one's best friend, the body of a blacksmith seen years since at a country crossroad, the mustache of yesterday's organ-grinder, and the eyes of last year's cotillion leader, and cast the composite of them (together with the composite suggestion of personality that results) as the villain of a piece.

It, too, has memory storehouses full of stage properties; mental cupboards crammed with costumes; a brain-cell index of likely places. It, too, has a marvelous mechanic, called Imagination, that contrives effects that are not in stock out of odds and ends of raw material.

And when a story-teller's scenario is submitted to it, the directing mind of this establishment—contriving, as they are needed, actors from this troupe; stage properties from these

stores; costumes from these cupboards; scenes from this cell catalogue—proceeds, paragraph by paragraph, and page by page, before the estimating eye of our intelligence, and well or ill according to its ability and its resources, to *retell the author's story in the recollective and imaginative and emotional terms of its own equipment.*

V

Do you, by any chance, doubt this?

If so, I have a confession to make. I have, deliberately and with malice aforethought, deceived you. The photo-play performance of "The Two Rattlesnakes" never took place. *There never has been such a photo-play.*

I made that all up "as I went along," as the children say. And I placed before you, not a story, but only the skeleton of a story—the merest dry bones of a half-finished scenario.

Yet I'll warrant that in reading it you pictured to yourself a Jim of your own fancying, walking down a hillside of your own invention.

Is it not so?

Moreover, when you stop to consider it, you will see that this cannot be otherwise.

The terms of one's own equipment are the only terms in which a story can reach us.

For the hero that the author imagined is forever invisible to us, no matter how minutely he describes him. And though we chance to live there, it is in *our* Chicago, and not in his, that we stage that chapter of his tale. Indeed, if he describes a character too minutely—if he keeps our minds too long from imagining their own protagonists in the effort to imagine his—our minds end by shrugging their shoulders, going on strike, and refusing to imagine *any*. And it is for the same reason that we so often skip elaborate descriptions of scenery, and that meticulously[1] word-painted landscapes commonly prove invisible to the eyes of our imaginations.

[1] *Meticulously:* very carefully.

Nor is it alone to the things of the senses that this inexorable law applies. It is the same with less tangible stage properties. When we are called upon to "register" horror, we have only our own brands of that emotion to register. When a mental attitude is asked of us, we can but place our own minds, like lay figures, in, or somewhere near, the posture demanded. And if the specifications of our author's scenario include a spiritual reaction, we must either supply it, or a substitute for it, from the laboratory of our own spirit, or else pass on, saying in effect (as the motion-picture man would say in the vernacular), "Kill that soul stuff!"

VI

Shall we put it that we have now acquired the equipment necessary to read what follows? For that, after all, is what we really mean.

We read, then, quite literally, with our own experience. We read with what we have seen and heard and smelled and tasted and felt. We read with the emotions we have had—with the love we have loved, the fear we have feared, the hate we have hated. We read with the observations we have made and the deductions we have drawn from them; with the ideas we have evolved and the ideals we have built into them; with the sympathies we have developed and the prejudices we have failed to rid ourselves of.

"Learning to read" in the common-school sense—learning, let us put it, to *read print* and learning to *read handwriting*—has exactly as much (and exactly as little) to do with our reading of a novel as it has with Forbes-Robertson's "reading" of Shakespeare.

Learning to read, in the real sense, means enlarging our equipment, and learning creatively to use it.

We *receive* in reading; but we receive, not directly by what the author tells us, but indirectly, by the new uses that he stimulates us into putting our experience to.

VII

The truth is that our heads house other industries besides that of moving-picture making. And one of these is a distillery.

Here the raw materials of crude experience—like, say, the jerking of a burned finger out of the flame—are treated by a secret process and "ideas"—like the idea that fire is hot—are extracted from them. You cannot, as most of us know from experience, put the idea that fire is hot into a child's head. *The best that you can do is to supervise the delivery of the raw experience at the gate of the distillery.*

But we are more than distillers of low-grade ideas—of these comparatively crude, first-hand realizations.

We are blenders and rectifiers of these as well.

We combine two or more of them and from the mixture we distill a sublimated extract—the idea, say, of a resemblance. We combine a number of these ideas of resemblance and from the blend distill a still more rarefied essence—the idea, say, of a generalization. And each of these ideas—each of these home-made products of our distillery—becomes a permanent item of our stock in trade. Each of them is, so to say, stored away in its own bottle, ready for use in our further experiments.

And these further experiments—these combinings of ideas that we have in stock—are by no means always made on our own initiative. They are often—more often than otherwise—made on order, or by suggestion.

Smith meets Jones in the subway and they have a little chat.

Later, Smith says to his wife, "Keen chap, that Jones. He gave me a new idea today."

But of course he didn't.

What Jones gave him was a formula.

He suggested that if Smith would take some of the Idea in Bottle 68, and some of the Idea in Bottle 7042, and mix them, he'd get such and such a result. And Smith did. And he got it.

But, suppose Smith hadn't had the ingredients in stock?

VIII

Let us take our own case.

When you began this chapter, you quite definitely didn't have in your head several ideas that are now there.

You didn't, for instance, have in your head the idea that authors do not tell us stories; that they only issue instructions to us for telling ourselves stories; that they only write "scenarios" for us to "produce."

How, then, did this idea get into your head?

Not, certainly, by my putting it there.

If you are inclined, for the moment, to think that I did this, you have only to turn back to Section II of this chapter in order to see how you felt toward *it*, and what you thought of *me*, when I pretended to think that I *could* put this idea into your head.

No. I didn't put it there. I couldn't.

All that I could do was to furnish you, in the proper order, the various formulae needed for distilling it; to see that you were supplied, on occasion, with certain necessary raw materials; and to stimulate you, from time to time, to make certain combinations out of these ingredients.

I knew, for instance, that you were going to need the idea that there are two meanings to the expression "learning to read"; and I was afraid that you might not have this idea in stock. So I suggested that you take a number of ideas that I knew you *could* supply from stock—the ideas of an inquisitorial host; of a series of guests, each of whom thought in his own way that he had learned to read, once for all, when he was a child; and of one guest who thought he hadn't—I suggested that you take these simple ideas and mix them in a certain way. And you did as I suggested and got the desired result—the more complex idea.

And I took pains to "stimulate you into making this new combination of ideas that were already on hand."

That was a part of my job as author.

I did it, in this case, by inducing you to dramatize the ideas; by inducing you to imagine people holding these ideas, or enacting them. In fine, I did it by *inventing this dinner party;* which, like the photo-play of "The Two Rattlesnakes," never took place.

But the dinner party and the photo-play were invented for entirely different reasons. In the latter case I knew that you were going to need the idea that *we read in terms of our own equipment and not in terms of the author's equipment; and I was also afraid that you did not have this idea in stock.*

But this is an idea that is not easily derivable from the mixing of other, simpler ideas. This is an idea that we get best first-hand, from experience—by actually doing the thing and watching ourselves do it. It is practically one of those realization-ideas, like the idea that fire is hot. Its extreme complexity is due to the extreme complexity of the experience itself.

So I took measures to supply you with the experience.

I wrote a scenario and I tricked you into "producing" it.

And then, while the experience was fresh in your mind, I called your attention to what you had done.

CLASS ACTIVITIES

Suggestions for Study

1. Make a terse summary of Kerfoot's leading ideas.

2. We have an expression, "Reading between the lines." What does it mean? Illustrate.

3. Read something between these lines:

(*a*) There is a garden in her face
Where roses and white lilies show.

(*b*) Build thee more stately mansions, O my soul,
As the swift seasons roll!

(*c*) If it be a sin to covet honor,
I am the most offending soul alive.

(d) The heights by great men reached and kept
Were not attained by sudden flight,
But they, while their companions slept,
Were toiling upward in the night.

(e) Charity suffereth long and is kind; charity envieth not; charity vaunteth not itself, is not puffed up.

4. Write out from memory two lines of poetry; exchange with a classmate and let each try to read between the lines.

5. Place several little "Stop, Look, Listen" signs on the margins of Kerfoot's article. Stop, look, and listen to what is going on in your own mind at any of these signs. Write down what you are contributing to the thought at three of these signs.

6. On a frosty morning you may see your window apparently covered with snow-capped mountains, frozen lakes, whitened forests. Explain why you see winter scenes. Why do different people see different objects in the moon?

7. It is said that certain Eskimos visiting London saw nothing of interest in the streets of that city. Explain why this might be true.

8. "He brings most away from an art gallery who takes most to it." What story does this little scenario enable you to tell to yourself?

9. Great tragedies:

(*a*) A woman with a rag-time capacity, attending grand opera.
(*b*) A man with a dime-novel capacity, given *Hamlet* for a Christmas present.
(*c*) A person with a Sunday-supplement capacity, privileged to spend a day in a great art gallery.
(*d*) A man with Chautauqua privileges, possessing a Coney Island taste.
(*e*) A man with great abilities, in a mediocre position.

Can you name other similar ones?

10. An American, visiting the wonderful natural history museum in London, heard another American tourist exclaim: "Them little snakes! They ought to see our snakes in the United States!" Can you match the illustration of limited contributing capacity?

11. Prepare a set of vital questions which you would ask the author of your next selection in the literature class. If you prefer, choose a reading you must do for one of your other classes.

12. In your next class in which oral reports are being presented, jot down one idea contributed by your own mind as each pupil speaks.

13. Listen to an assembly speaker, a preacher, or any other public speaker. Write down in rough notes two sets of data: first, what was said that you received; second, what was not said that you contributed. Pay special attention to your share of the partnership.

14. Looking back over the text as much as you please, prepare three questions, pertinent to Mr. Kerfoot's main thought, which you might ask him if he were here.

15. Did any questions arise in your mind as you read Kerfoot which were answered before you had finished the article? Explain.

16. It is especially true that one who is presenting an argument to readers or to listeners needs to anticipate the questions which doubtful or opposing people in his audience will ask. One test of good argumentative writing or speaking is the presence in the argument itself of just such anticipatory questions, with their answers. A good debater often uses sentences with beginnings like these: "But I hear someone objecting that ——," "A careful person will doubtless inquire at this point ——," "Does anyone hesitate to believe that ——?" Explain why such sentences are indicative of a skillful debater.

17. About the best example in American literature of a writer endeavoring to anticipate and answer the queries and doubts of his readers is found in Lincoln's "First Inaugural Address." Almost the entire speech moves forward by the replies Lincoln made to unspoken but inevitable objections on the part of many citizens. Look up the address to see how many objections Lincoln answers. In this connection read also Lincoln's "Cooper Institute Address."

18. Recall at least one place in Kerfoot's article at which you summoned up either a similar experience or a contrasting experience of your own. The easy example of course will be a movie in which you told yourself the story. Try to avoid this example. These phrases from Kerfoot are better for the present problem:

> "Before the recording eye of the camera."
> "When we pay down our $1.35."
> "We read with what we have tasted."

19. Turn back to the discussion about the preparation of good reading cards, pages 71-73. How does that advice fit in with the central idea of Kerfoot's article?

SECTION III

PEOPLE READ BOOKS[1]

ALFRED KREYMBORG

People read books.
They go to the play.
People hie to operas and museums.
Not that they read books, go to the play, hie to operas and museums;
But that they go to themselves, read themselves, hear themselves, see themselves.
They don't like what they don't read of themselves, hear of themselves, see of themselves.
They have a tendency to think that bad,
And so to express themselves.
They like what they read of themselves, hear of themselves, see of themselves.
Have a tendency to think this good,
And so to express themselves.
People cannot read what they cannot read, hear what they cannot hear, see what they cannot see.
One stands in front of a glass, sees what one sees, cannot see what one cannot see.
But a looking-glass is monotonous.
Liking oneself monotonous.
One must vary the glass and the liking.
The liking-glass.
So people read books,
Go to the play,
Hie to operas and museums,
Say how-do-you-do to themselves,

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[1]Reprinted by permission from *The Bookman*, Volume 52, page 514, George H. Doran Company.

Smile and accept themselves,
Frown and disown all others.
It is well indeed that they do.
Most fortunate that they do.
It is all they can do.
There are millions upon millions of miles of earth, air, and water
that cannot hear them or see them.
Quadrillions upon quadrillions of stars that cannot accomplish
the miracle.
That couldn't, if they wanted to, haven't it in them to want to.
So it is well that people read books, go to plays, hie to operas
and museums.
Well indeed that they hear and see themselves.
Most fortunate that they like what they are.
And so express themselves.
It is all they can do.

CLASS ACTIVITIES

Problems

1. Compare the meaning of "People Read Books" with Mr. Kerfoot's statement that no one ever told anyone else a story, page 204.

2. Why is "People Read Books" well written? What principle of Part I of this chapter does it illustrate?

3. Find any good cartoon and read it. Display it to the class and explain what your contribution was.

4. State in your own words what people do when they read books.

5. Tell the class of a book in which you have seen yourself.

6. Discuss your attitude toward books which try to teach you lessons of conduct. What is the difference between a great book and a mediocre book in this respect? Cite examples.

SECTION IV

TRANSLATING LITERATURE INTO LIFE[1]

ARNOLD BENNETT

Reading Suggestions

1. Arnold Bennett maintains that there is no value in reading a book unless it leads you to do something. See how he develops this theme, and consider whether or not you agree with him.

2. In general, are you an "active" or a "passive" reader? You will have abundant opportunities to be "active," to make contributions, as you read Mr. Bennett's short article. Try to do so. Keep a brief record of your thinking in the form of notes for class discussion.

Lo, a parable! A certain man, having bought a large, elaborate, and complete manual of carpentry, studied it daily with much diligence and regularity. Now there were no cupboards in his house; his dining-table consisted of an arrangement of orange boxes, and he had scarcely a chair that was not a menace to the existence of the person who sat upon it. When asked why he did not set to work, and, by applying the principles of the manual, endeavor to improve the conditions of his life and of the lives of his wife and children, he replied that he was a student, and he plunged more deeply than ever into the manual of carpentry. His friends at length definitely came to the conclusion that though he was an industrious student, he was also a hopeless fool.

By which I wish to indicate that there is no virtue in study by itself. Study is not an end, but a means. I should blush to write down such a platitude, did I not know by experience that the majority of readers constantly ignore it. The man who

[1]Reprinted by permission from *The Bookman*, Vol. 50, pages 98-100. George H. Doran Company.

pores over a manual of carpentry and does naught with it is a fool. But every book is a manual of carpentry, and every man who pores over any book whatever and does naught else with it is—deserving of an abusive epithet. What is the object of reading unless something definite comes of it? You would be better advised to play billiards. Where is the sense of reading history unless you obtain from it a clearer insight into actual politics and render yourself less liable to be duped by the rhetoric of party propaganda? Where is the sense of reading morals unless your own are improved? Where is the sense of reading biography unless it is going to affect what people will say about *you* after your funeral? Where is the sense of reading poetry or fiction unless you see more beauty, more passion, more scope for your sympathy, than you saw before?

If you boldly answer: "I only read for pleasure," then I retort that the man who drinks whisky might with force say: "I only drink whisky for pleasure." And I respectfully request you not to plume yourself on your reading, nor expect to acquire merit thereby.

But should you answer: "I do try to translate literature into life," then I will ask you to take down any book at random from your shelves and conduct in your own mind an honest inquiry as to what has been the effect of that particular book on your actual living. If you can put your hand on any subsequent period, or fractional moment, of your life and say: "I acted more wisely then, I wasn't such a dupe then, I perceived more clearly then, I felt more deeply then, I saw more beauty then, I was kinder then, I was more joyous then, I was happier then, than I should have been if I had not read that book"—if you can honestly say this, then your reading of that book has not been utterly futile. But if you cannot say this, then the chances are that you have been studying a manual of carpentry while continuing to sit on a three-legged chair and to dine off an orange box.

You say: "I know all that. But it is not so easy to translate

literature into life." When I think of the time I have wasted in reading masterpieces, I stand aghast.

The explanation is simple. Idleness, intellectual sloth, is the explanation. Self-conceit is the explanation. If you were invited to meet a great writer, you would brace yourself to the occasion. You would say to yourself: "I must keep my ears open, and my brain wide-awake, so as to miss nothing." You would tingle with your own bracing of yourself. But you—I mean "we"—will sit down to a great book as though we were sitting down to a ham sandwich. No sense of personal inferiority in us! No mood of resolve! No "tuning up" of the intellectual apparatus! But just a casual, easy air, as if saying to the book: "Well, come along, let's have a look at you!"

What is the matter with our reading is casualness, languor, pre-occupation. We don't give the book a chance. We don't put ourselves at the disposal of the book. It is impossible to read properly without using all one's engine-power. If we are not tired after reading, common sense is not in us. How should one grapple with a superior and not be out of breath?

But even if we read with the whole force of our brain, and do nothing else, common sense is still not in us, while sublime conceit is. For we are assuming that, without further trouble, we can possess, coördinate, and assimilate all the ideas and sensations rapidly offered to us by a mind greater than our own. The assumption has only to be stated in order to appear in its monstrous absurdity. Hence it follows that something remains to be done. This something is the act of reflection. Reading without subsequent reflection is ridiculous; it is equally a proof of folly and of vanity.

Further, it is a sign of undue self-esteem to suppose that we can grasp the full import of an author's message at a single reading. I would not say that every book worth reading once is worth reading twice. But I would say that no book of great and established reputation is read till it is read at least twice. You can easily test the truth of this by reading again any

classic; assuredly you will discover in it excellencies which had previously escaped you.

To resume and finish: Open a great book in the braced spirit with which you would listen to a great man. Read with the whole of your brain and soul. Tire yourself (would you not tire yourself at tennis?). Reflect. After an interval, read again. By this process, and by no other, will a book enter into you, become a part of you, and reappear in your life.

I have been consulted about the practice of making notes. Well, I do not care to offer counsels of perfection. My advice is simply to keep a pencil handy and to write down on a small sheet of paper (or in the inside back-cover if the book belongs to you) the number of the page on which anything has struck you, together with the merest hint, in half a dozen words, of what it was. If you do this, by the time you have finished the book, you will have automatically constructed a table and page-index of its salient points. It is well, of course, to write on the papers the title and author of the work, the name of the edition, and the date of perusal. A collection of these small sheets of paper would constitute a souvenir of one's reading. At the end of each year one might advantageously spend a few shillings in having the year's harvest bound. Say you have read a hundred books. A hundred uniform leaves would make a respectable volume, whose interest and utility I need not insist upon. A row of such volumes would really amount to the secret history of one's life.

CLASS ACTIVITIES

Class Exercises

1. Translate a real or an imaginary situation into a parable that will have the same general meaning as Bennett's parable of the man who read diligently a manual of carpentry.

2. Recall instances of your school life this year in which your instructors (especially in the science laboratories) have translated into life materials found in a book.

3. Use for a "round-the-circle" discussion: "A book which led me to 'act more wisely,' or 'perceive more clearly,' or 'feel more deeply,' or 'see more beauty,' or 'be more kindly,' or 'decide more justly.'"

4. "When I sat down to a book as if to a ham sandwich." Have you done that with THE MIND AT WORK? Whose fault is it?

5. Choose one passage in a piece of literature you are studying. Talk to the book, as Mr. Brooks did to his. (Page 195.) Read aloud your comments to see their wide variety.

6. Apply the suggestion in Bennett's last paragraph to your work on memory, Chapter IV. Experiment by trying it out with some book you think worth reading twice.

7. Read Mr. Bennett's last paragraph carefully. Secure copies of such blanks as the *Royster Reading Report Blanks,* Scott, Foresman and Company, and with their aid carry out Bennett's final suggestion for a definite period of time.

8. Defend reading for pleasure.

9. What is the purpose of the initial or preliminary survey of a selection in the light of Bennett's suggestions?

10. Kerfoot thinks a good reader is an "anabolic" reader, one who builds up new ideas and meanings for himself. (See page 204.) In what sense is a good reader a "tearer down," or "katabolic" reader? (Consult Bennett, page 218.)

11. Explain, with examples, what you think the phrase "translate literature into life" means.

12. Name a book which has made a contribution to you, explaining definitely what the contribution was.

SECTION V

LITERATURE CAN GIVE YOU AN OUTLET[1]

C. Alphonso Smith

Reading Suggestions

"Literature Can Give You an Outlet" is a part of the first chapter of a book which you ought to read entire. *What Can Literature Do for Me?* is probably in your library; it may be part of the equipment of your English classroom. From the personal style in which Mr. Smith writes, you can see that he talks intimately of the meaning of literature in terms of books which many of you have read. For the short extract presented here, let these be your reading problems:

(1) Compare Mr. Smith's theme with Mr. Kerfoot's and with Mr. Bennett's in the preceding selections. See if you can write one sentence which will cover the themes of three men.

(2) Look for, note carefully, write out in your own words, and remember the statement Mr. Smith makes about the man who "creates universal literature."

(3) Notice the striking character of the illustration which compares the truth found in the multiplication table with the truth found in a poem or essay. The main difference lies in what the two kinds of truth do for the reader, what effect they have upon him.

(4) When Mr. Smith urges us to find in literature an "outlet," asking us to find what it has in common with ourselves, he is stating in another form the central idea of this chapter. Be ready to explain how this is true.

Why is Lincoln's Gettysburg speech literature, and why is Edward Everett's two-hour speech on the same occasion not literature? Let us picture the scene: There were men, women, and children in that audience who had lost brothers, sons, husbands, and fathers on the very ground on which they now stood. It was to them a holy place. It did not suggest to their

[1]Reprinted by permission from C. Alphonso Smith's *What Can Literature Do for Me?* Copyright by Doubleday, Page & Company, and used by permission of the publishers.

minds vexed political questions; it suggested memories that were almost too sacred for words. What these people needed was a spokesman who should put into fitting words the dumb emotions that filled every heart, and this is what Lincoln did. He put their emotions into language "plain enough for any boy I know to comprehend." But he did more. He expressed what all of us feel when we stand on a spot hallowed by heroic self-sacrifice. It may be a battlefield of victory or an equally glorious battlefield of defeat; it may be the birthplace or the grave or the home of a great man. The important thing for us is to feel anew the ennobling, the dedicating, influence of the place itself. The man who can put this universal feeling into universal words not only creates universal literature, but becomes a universal benefactor.

This is just what Edward Everett did not do. He did not speak for the audience, but to them. He entered into a long argument as to the relation of the federal government to the state governments. "Your argument," wrote Lincoln, "was new to me, and, as I think, is one of the best arguments for the national supremacy." Everett replied, "I should be glad if I could flatter myself that I came as near to the central idea of the occasion in two hours as you did in two minutes."

Now what Lincoln did for the Gettysburg audience, the great poets and prose writers, the masters of literature, have done for mankind at large. A poet is a man who feels as we feel, but has the gift of expression. Literature includes all writings that express for us what we consciously or unconsciously feel the need of saying but cannot. It includes the prose and verse that find us at most points, that take our half-formed thoughts, our suppressed moods, our stifled desires, and lead them out into harmony and completeness.

It is different with arithmetic or geometry. The multiplication table, for example, is as valuable a piece of information as was ever compressed into so small a space. But compare it with these lines:

So nigh is grandeur to our dust,
So near is God to man,
When Duty whispers low, "Thou must,"
The youth replies, "I can!"

All of us have felt that when we have to do a thing we seem to be given a new power with which to do it. Young people especially, as Emerson implies in his last line, have had this experience. Perhaps one reason is that when we know we must perform a certain duty, we stop wasting thought on how to escape it and so concentrate all our powers on actually doing it. Perhaps also we had never consciously thought of the reason for this principle of human nature, but had nevertheless been vaguely conscious that the principle was true. At any rate, when we read Emerson's lines we feel that he confirms and expands and elevates a mere impression into a definite thought, gloriously expressed. He has turned the light on our own nature, and we know ourselves better. We begin to realize that whenever "I can" follows "You must," it is an evidence not of weakness but of the native nobility of human nature.

Now the multiplication table is just as true as anything ever said by a poet. Perhaps it is truer, but it is true in a different way. We do not feel like saying: "Why, this table merely expressed what I had already felt or been dimly coming to, but expresses it with a beauty and force and completeness that give me a new sense of its truth." No one ever said that of the multiplication table and no one ever will. Emerson's lines, in other words, meet you halfway; the multiplication table does not. Emerson's lines are an outlet through which your own thought and feeling flow, and deepen as they flow; the multiplication table has to be put into you from the outside.....

Consider the truth of Coleridge's *Ancient Mariner*. This great poem may seem at a first reading to be a jumble of impossible facts set to haunting music. But it is nothing of the sort. It is the story of a man who, by an act of cruelty done to a harmless bird, came to feel himself an outcast. He had

cut all the cords of sympathy that bound him to the living things about him—to man and bird and beast. He was so miserable that it was a small matter to him whether he lived or died. At last his sympathy with living things came back to him because, almost without knowing it, he found himself rejoicing in the joy of the water snakes that played around the ship. Everything is restored now as it was, and the law of love is so burned into his soul that, as long as he lives, he must buttonhole others and tell them his experience.

All the so-called facts in the poem, all the events, bear directly on this experience. Did you never have an experience like it? Whether you are old or young, did you never kill or strike or hurt an innocent thing and feel mean and lonely for it? If so, you have lived *The Ancient Mariner* without knowing it. The poem is a part of yourself. Coleridge might have written from your experience as well as from an imaginary mariner's. But you have never knowingly or unknowingly proved by your own experience that the square of the longest side of a right-angled triangle is equal to the squares of the other two sides.

Do not approach literature, then, from the fact-side, but from the heart-side. Strike first for what it has in common with yourself. See in it an outlet, not an inlet. Unfortunately it is still taught—you may be sure not learned—from the fact-side. I have before me three editions of *The Ancient Mariner*. They all have long introductions telling the facts about Coleridge's life, when and where the poem was written, when and where it was added to, what kind of line and stanza the poet used, what book or books he probably read before writing the poem, but not a word as to what the poem has in it for you and me or of you and me. Now the life of a poet, the date of his work, the kind of meter employed, all have something to do with a poem. But they are secondary, not primary. The first thing to do is to find yourself in the poem itself. When you do this, when the poem means something to

you, when you see in it a reflection or extension of yourself, when it becomes a real outlet for you, you will want to know something about the writer. Seek first, however, yourself in the poem, and all these other things will be added unto you. You can no more learn literature from the history of literature than you can learn arithmetic from the history of arithmetic.

If you could summon before you the makers of literature, they would tell you that they found their inspiration not in introductions to great books, not in discussions of great books, not in learned notes about great books, but in great books themselves. They found themselves in these books, for these books were a voice from within, not a fact from without. Listen to some of the men who have put their experience on record: ....

Shakespeare (says Robert Louis Stevenson, the author of *Kidnapped*) has served me best. Few living friends have had upon me an influence so strong for good as Hamlet or Rosalind. The next book, in order of time, to influence me, was the New Testament, and in particular the Gospel According to St. Matthew. I believe it would startle and move anyone if he could make a certain effort of imagination and read it freshly like a book, not droningly and dully like a portion of the Bible.

You will notice that Stevenson does not refer to a particular passage or verse or chapter from the Bible; he refers to a whole book. He evidently read the Bible not by fragments, but by books. No masterpiece of world literature has suffered so much by piecemeal reading as the Bible.....

Philip Gilbert Hamerton, the well-known writer on art, found a lasting delight in the poetry of Walter Scott because he and Scott were both lovers of lakes, hills, and streams.

I began with the poems, and read them so often that I almost knew them by heart before I had read a single page of the prose tales. *The Lady of the Lake* was my especial favorite, and I have no doubt that my early enthusiasm for that

delightful poem implanted in me a love for beautiful lakes with romantic islands in them which had practical consequences afterward. Even to this day these feelings are as lively in me as ever, so that nothing in the world seems to me so completely delightful as a lake if one has a sailing-boat to wander over it. Scott, too, had the same love for hills and streams that I had imbibed from nature in my youth, and in his narratives of adventure he suited my temper so exactly that to read him was a complete satisfaction, without any drawback whatever. I am still a reader of Scott, and never appreciated the qualities of *Ivanhoe* so completely as on reading that masterpiece last year. Of all authors it is Scott who has given me the greatest sum of pleasure, and that of a very healthy kind.

Hamerton's own preferences remind us that it will not do to lay down hard and fast rules for reading. The main thing is to find the writer or writers, the book or books, that enrich your thinking by interpreting it. Sometimes the right book startles or warns you, sometimes it takes issue squarely with you, sometimes it reveals new powers latent in you, but in every case it reveals something in common with you, and on this common basis you rise toward its level. One would think that if Hamerton loved lakes, streams, and hills, he might have found a congenial spirit in the great nature poet, William Wordsworth. "But there was something in Wordsworth," says Hamerton, "that I found repellent, perhaps his belief in his own moral and intellectual excellence." When our own nature poet, William Cullen Bryant, first read Wordsworth, he said, "A thousand springs seemed to gush up at once into my heart, and the face of nature changed of a sudden into a strange freshness and life." He had found a mind greater than his own, but thoroughly in sympathy with him. Like had met like. It was Lincoln and the Gettysburg audience again.....

But I like to consider the service that great writers have rendered to mankind at large, and not merely to those who were to become great writers themselves. The Gettysburg

Speech has doubtless helped thousands of orators and would-be orators, but it has helped tens of thousands of people who are not orators and who have never given expression to their indebtedness by tongue or pen. The greatest service of literature has been in behalf, not of professional writers and speakers, but of those who feel the need of a spokesman all the more keenly because they lack the ability themselves to voice their own feelings. Great singers help other singers, but the pleasure that they give to those who are themselves unable to sing is many times greater than the service rendered to the few professionals. Most of us are songs without words, only the few know the words, but all feel the thrill when the words are sung. It may be sorrow, or joy, or mere perplexity, or dull indifference, but, whatever it is, it craves expression.....

Literature, then, is within you. The masters only bring it out. It is to your soul that they cry "Open Sesame." Whenever you say of a poem or story, "That's what I have dimly felt before—or felt a thousand times before—but could never say," freedom through expression has begun. The masters have found you and you have begun to find yourself.

CLASS ACTIVITIES

Problems and Projects

1. Mr. Smith refers to Edward Everett's long oration which immediately preceded Lincoln's short address at the Gettsyburg battlefield. Appoint representatives to secure a full account of that occasion and report on it to the class.

2. Many immature readers fail to re-think ideas for themselves; they are content merely with absorbing ideas of others. In contrast, an energetic student turns ideas over in his mind, weighs them, works them over until he succeeds in adding to or subtracting from the original ideas as he secures them from the printed page. Someone has pointed out that no thought really belongs to a reader until he has thus defined it for himself and has fitted it truly into his own experience.

Select a passage from one of your books of literature and in reading it follow the advice of the preceding paragraph.

3. Study any poem current in your literature class. Analyze the kind of mental content the reader has to have to appreciate it.

4. Why can you very easily learn to drive a standard gear-shift car, if you have previously driven a Dodge? Why is it more difficult if you are experienced in driving a Ford? Why, then, is it difficult for a reader who peruses the sporting sheet, exclusively, to read good books?

5. What is your idea of the difference between "speaking for an audience," and "speaking to them or at them"? Mr. Smith seems to imply that a public speaker ought to do the former, preferably. Do you agree? Did Lincoln in "The Gettysburg Address" speak to or for his immediate audience?

6. On pages 224-25, Mr. Smith boils down the story of *The Ancient Mariner* to one short paragraph. Try to do the same with one of your other English classics, one recently read. Below your paragraph write down the processes of reading upon which you depended for the information you used in your abstract.

7. Have you any experience with books similar to that of Hamerton with Sir Walter Scott's books? (See page 226.) One of you might name as books which have yielded you similar comfort: *Lorna Doone, John Halifax, Gentleman,* or *Captains Courageous.* What books can you name? Make a list on the board from the suggestions given.

8. The significance of a fact, when it has entered the mind of an individual or a group, and has been transformed into thinking by the activities of the hearers' minds, is well illustrated in a story told by John B. Gough.

> A child was persistently disturbing the sleep of the passengers of a Pullman car. At last an old miner, completely exasperated, exclaimed:
>
> "Where is that child's mother?"
>
> The father of the child, who had been doing his best to comfort the babe, replied,
>
> "In the baggage car, in a coffin."
>
> The information imparted immediately transformed the attitude of the passengers; their minds were filled with new thought and purpose. The gruff old miner rose from his berth and, relieving the tired father, began to walk the floor with the babe. There was not another word of complaint during the entire journey.

Can you give any data which will tend to show in a similar manner what an isolated fact can accomplish when it has been transformed into thinking and feeling in the hearers' minds and hearts?

9. Compare Smith and Bennett on the use of books. Which conception do you prefer? Why? Also compare Ruskin (page 193) and Smith on the same point.

10. Mr. Smith seems to think that the business of an author is to find a sympathetic response. Is it not part of a writer's duty to create a sympathetic response in his readers? In reply, refer to an intensely interesting story you have read or heard.

11. How does the statement that a poet is stagnating if he is ever satisfied with the poetry he writes, apply in your own school life?

12. Mr. Smith speaks of books forming an "outlet" for us. In what sense may they be considered as forming an "inlet"?

13. In Chapter V of *What Can Literature Do for Me?* the author explains that literature "can show you the glory of the commonplace." Read the chapter thoughtfully, and then write a paragraph or two which Mr. Smith might have inserted about Burns, or Whittier, or any other poet of your choice. Be sure that your paragraphs are in strict keeping with the tone of the chapter.

Problems for Oral or Written Work

Read through the following excerpts, each presenting a phase of the central theme of this chapter. Select three which seem to you most interesting, most appropriate for your thought. Then endeavor to restate in simpler form the thought of each chosen excerpt and to supplement it with illustrations from your own experience as a student or as an observer of others. Read aloud in class what you write.

1. Looking beneath the surface:

Literature fails to show on the surface all that the reader is expected to see. Much of it states only a very small part of this. Consider the following verse; tell what it shows on the surface, and what it really means to you:

> The quality of mercy is not strained;
> It droppeth as the gentle rain from heaven
> Upon the place beneath; it is twice blest;
> It blesseth him that gives and him that takes.

2. Letting the mind play:

When Shakespeare is giving an account of the various qualities that make up man's excellence, he includes "looking before and after." We let our minds play around all that is submitted to them, and in this way get to a truer knowledge.

3. Setting one's mind to work:

For my own part, I value more and more the books that set my mind to work.

4. Getting at the bottom:

There is no way of getting at the bottom of Shakespeare.

—H. W. MABIE, *Books and Culture,* page 9.

Find a passage and demonstrate this.

5. Seeing a flat surface when you read:

Some readers see only a flat surface as they read; others find the book a door into a real world, and forget that they are dealing with a book. The real readers get beyond a book, into the life it describes.

—H. W. MABIE, *Books and Culture,* page 47.

6. Reading like love-making:

The truth is that the reading of books is like love-making because it takes two. It is not enough for the author to give; the reader must know how to take, and not only how to take, but how to give in return.

—F. TENNYSON JESSE, *The Bookman,* Vol. 47, page 314.

7. What significance, if any, has this distinction of Wordsworth for a reader?

Wordsworth, the poet, protested against calling language or diction the *dress* of our thoughts . . . He said, "Language is the incarnation of our thoughts."

—A. QUILLER-COUCH, *On the Art of Reading,* pages 227-28.

8. How can a bad reader make a bad book?

My point is that a thoroughly bad reader does make what he is pleased to call a thoroughly bad book. We all admit that there are plenty of bad books, but who has given due thought to the bad readers?

—F. TENNYSON JESSE, *The Bookman,* Vol. 49, page 316.

9. Cramming vs. ruminating:

Reading furnishes the mind only with materials of knowledge; it is thinking that makes over what we read. We are of the ruminating kind, and it is not enough to cram ourselves with a great load of collections; unless we chew them over again, they will not give us strength and nourishment.

—J. W. BALDWIN, *The Book Lover,* page 44.

10. Digesting:

"Much reading," says Dr. Robert South, "is like much eating—wholly useless without digesting."

—J. W. BALDWIN, *The Book Lover*, page 44.

11. Coleridge's classification of readers:

He said that some readers are like jelly-bags—they let pass away all that is pure and good, and retain only what is refuse. Another class he typified by a sponge; these are they whose minds suck all up, and give it back again only a little dirtier. Others, again, he likened to an hour-glass, and their reading to the sand that runs in and out, and leaves no trace behind. And still others he compared to the worker in mines who retains the gold or the gem, and casts aside the dust and the dross.

—J. W. BALDWIN, *The Book Lover*, pages 54-55.

12. Surpassing the bare statements of a book:

It is not alone in literature proper that an intelligent reader is required to supplement the bare thought of a text. Suppose he is reading an article about a great reclamation project by which an arid desert has been transformed into productive land. The real student must surpass the bare statements of the printed page, and in his mind's eye reconstruct the contrast between the arid waste of sand, and the blooming fields of grain. To aid in this respect, textbooks often accompany expositions of the sort just suggested by pictures, in the hope that all readers, and especially the dull, inexperienced, or lazy readers may be assisted in doing the necessary work. But oftentimes such visual aids are not present. One major difference between mediocrity and expertness in reading lies largely in the absence or the presence of the reader's constructive imagination, by which the words of a text are in the reader's mind illuminated into vivid realities, the reader making the pictures for himself. Think of a situation in which you have read expertly in the sense named.

Alternative: Have you ever felt irritated because of poorly drawn illustrations or wretched pictures, or other inadequate visual aids in a book? Have you ever preferred to create your own mental picture of a character rather than look at the one in a book? If so, tell the class about your experience.

13. Under your teacher's guidance, plan and carry through a class exercise, in which, using a selection from your literature class, you try to make at least one marginal entry corresponding to each of the five steps named by Hall-Quest on pages 195-96.

14. Two quotations are here given from John Ruskin, the meaning of which may seem to be in direct opposition to much of the advice given in the present chapter. Ruskin says:

Very ready are we to say of a book, "How good this is—that's exactly what I think!" But the right feeling is "How strange that is! I never thought of that before, and yet I see that it is true; or if I do not now, I hope I shall some day." But whether thus submissively or not, at least be sure that you go to an author to get *his* meaning, not to find yours.

In another place, Ruskin speaks of "annihilating our own personality in reading," and "seeking to enter" into the author's.

You will begin to perceive that what you thought was a matter of no serious importance. Most probably you will have no legitimate right to an "opinion" on any business, except that instantly under your hand.

Do you think that a reader should be submissive, and regard his own thought "of no serious consequence," "annihilating his own personality in reading"? Explain. Do you see any way of reconciling Ruskin's views as here expressed with the central theme of this chapter?

15. Motten says, "The poem, the expressed word, is only the envelope, and we must open the envelope to get the message." Exemplify this with a poem found in a magazine of the year and month in which you are working. What is the message in the envelope?

Poetry in the High School, page 45.

16. Read again President Bryan's article on Memory, Chapter Four (page 182), to see how he applies the major principle of the present chapter to the "getting" process upon which good memory depends.

17. Charles F. Richardson also dwells upon the central idea of this chapter:

The great secret of reading consists in this—that it does not matter so much what we read or how we read it as what we think and how we think it. Reading is only the fuel; and, the mind once on fire, any and all material will feed the flame, provided only it have any combustible matter in it.

18. Though a man reads undisputed classics for twenty-four hours a day, though he has a memory of steel, though he rivals Porson in scholarship and Saint-Beuve in judgment, he is not receiving from literature what literature has to give. Unless he can read differently, it were better for him if he sold all his books, gave to the poor, and played croquet. Genius has offered him faith, courage, vision, noble passion, curiosity, love, a thirst for beauty; and he has not taken the gift.—Arnold Bennett.

19. The great poems of the world, the great books of the world, are written in invisible ink. It is your own personality that brings out the writing.—Anonymous.

20. He reads a book most wisely who thinks everything into a book that it is capable of holding, and it is the stamp and token of a great book so to incorporate itself with our own being, so to quicken our insight and stimulate our thought, as to make us feel that we helped to create it while we read.—JAMES RUSSELL LOWELL.

21. Kerfoot considers reading in the light of an investigation in which the reader experiments both with the book and with himself. A reader subdivides, distributes, and reassembles both the contents of the book and his own experience. In short, with the book serving as a guide, the reader is sent forth on a tour of investigation, and then is called back to make reports of his journeys. Deliberately plan to explore in this sense one of your assigned books in any school task. Be ready to speak of your exploration.

(*a*) Do you subdivide merely by chapters?

(*b*) Do you distribute some of your own contributing experiences? If so, what?

(*c*) Do you reassemble at various stages, and at the end, both the content of the book and your own experiences?

22. Another statement of Kerfoot's conception is that the reader is a "maker," whose materials are not sound, color, words, but his own accumulated experience. Everything he creates in reading corresponds to some actual happening of his own, or some possible happening. A reader never really grasps the contents of a book of autobiography, for instance, until he has read and reread into it the many possible selves that life has denied him the chance to be.

Does this give an explanation of our liking for books of wholesome accomplishment, of difficulties overcome and ultimate success? Does it explain also our distaste for unpleasant endings? The story goes that Kipling wrote an unhappy ending for *The Light That Failed.* Urged by his publishers, he rewrote the ending, making all come out happily. Later, Mr. Kipling canceled the happy ending. Some of you may care to read that novel, consider the unpopular ending, and express an opinion as to whether the happy ending is a logical one for the tale.

23. Explain your enjoyment of a favorite novel in the light of your own contributions to it.

24. Find ten passages in *Silas Marner,* or some other novel you know, in which the writer suggests to an alert-minded reader far more than she says. For example, from *Silas Marner:*

"The handsome brown spaniel that lay on the hearth retreated under the chair in the chimney corner when Dunsey entered the room."

Another good example occurs in *Macbeth,* when Macduff is told about the murder of his wife and children. Says one of his friends:

"What, man! Ne'er pull your hat upon your brows."

25. Read again Ruskin's paragraphs on pages 193-94. Is there any way of reconciling his idea of hidden meaning with the statement that great truths are often stated very simply?

Projects and Topics

Draw numbers by lot; work out the problem drawn.

1. A line of Shakespeare explained by an illustration from my own everyday experience.
2. Why do boys hide dime novels?
3. Misunderstanding a writer's meaning because of a poor supplement from personal experience.
4. Contradicting on the basis of too little experience; disaster!
5. Why a literal-minded person may not enjoy poetry.
6. How does a music lover respond emotionally to a great singer?
7. Read again Ruskin's figure on gold (page 194). Make a rough analogy of a mind finding the heart of a writer's thought, as compared with the smelting process by which the gold is extracted from the ore.
8. A book that I have "traveled" with.
9. A passage in a book with which I might have a debate.
10. A petty question I asked of a book.
11. A question I asked of a book that was not answered.
12. A "flash" in my mind as I read ..... (name the book or article).
13. A story spoiled by innumerable details.
14. When my mind ran off on a tangent.
15. The school reading to which I find it most difficult (or easy) to contribute.
16. The kinds of films which I, as a moving-picture machine, can most readily reproduce.
17. The right idea of "learning to read."

18. "What is the object of reading unless something definite comes of it?" (Bennett, page 218.) What definite result can come from reading *The Merchant of Venice?*

19. When I really "put myself at the disposal of a book."

20. Why certain school books repel me. What is at fault, the books or myself?

21. An athlete who will not play hard enough to tire himself. A reader who refuses to work hard at the game of reading.

22. When I met an author halfway.

23. Finding a part of myself in a poem. Use an example like Joyce Kilmer's lines:

> Poems are made by fools like me,
> But only God can make a tree.

Or use Sill's:

> A craven hung along the battle's edge,
> And thought, "Had I a sword of keener steel—
> That blue blade the king's son bears—
> but this
> Blunt thing; he snapped and flung it from his hand,
> And lowering crept away and left the field.

Or Holmes's:

> Build thee more stately mansions, O my soul.

24. Ask someone who served with the American forces overseas what songs the men liked best. Think of other very popular and lasting songs. Try to formulate a reason for this popularity in terms of the thinking in this chapter.

25. Using all "one's engine power" in reading.

26. Two kinds of reading notes: what the author says and what the reader thinks.

27. An example of approaching literature "from the fact side."

28. A book that has been a good companion to me.

29. What makes a poor listener.

30. When I did not have the "proper ingredients" in stock.

31. "Tell me the kind of books you read and I will tell you what you are."

ADDITIONAL READING PROJECTS

1. "Gentle Reader," F. T. Jesse, *The Bookman,* Vol. 49, page 314. Two sins of reading: distractions and "looking on." "There are plenty of bad books, but who has given due thought to the bad readers?"
2. "The Gentle Reader," S. M. Crothers, *Atlantic Monthly,* Vol. 86, page 654. How real literature differs from books of information; the personal element in reading; reading with an open mind.
3. "The Imagination," H. W. Mabie, *Books and Culture,* Chap. XII. "We never really possess an idea, a bit of knowledge, or a part of experience until we get below the mind of it into the heart of it."
4. "The Blank Paper Frame of Mind," G. S. Lee, *The Lost Art of Reading,* Chap. V. "A man knows Shakespeare in proportion as he gives himself, as he lets Shakespeare make a Shakespeare of him, a little while."
5. "The Supplementing of Thought," F. M. McMurry, *How to Study,* Chap. IV. The art of supplying content out of the reader's own mental stock.
6. "Concentration in Reading," Editorial, *The Outlook,* Vol. 114, page 304. "It is better to have a few ideas raised on your own premises than a whole orphan asylum of ideas which you have adopted."
7. "Two Ways of Reading," H. L. Koopman, *The Independent,* Vol. 74, page 1082. Reading "with the eye" contrasted with reading "with the inward ear." Work out this distinction with illustrations of your own.
8. "Reading," E. S. Martin, *Harper's Magazine,* Vol. 116, page 513. Why some people are better readers than others.
9. "Of King's Treasuries," John Ruskin, *Sesame and Lilies.* Lake English Classics, page 41, Scott, Foresman and Company. The best article on reading ever written.
10. "Muckraking the Dictionary," J. B. Kerfoot, *How to Read,* Chap. II. How the meaning of words is determined. Shows how important the context is in determining meaning.
11. "Are We a Shallow People?" *The Independent,* Vol. 55, page 572. "The people of the United States are intellectually bright, intellectually quick, and intellectually—lazy." Severe criticism of our people as consumers of trashy reading.
12. "Concerning Reading," Lyman Abbott, *The Outlook,* Vol. 112, page 893. Books of recreation, of information, of inspiration contrasted; and set over against books that "stop thought." Danger of getting notions of history from historical novels.
13. "Books That Stay By," Contributors' Club, *Atlantic Monthly,* Vol. 97, page 283. Why Stevenson remains a favorite with this

reader in contrast to other authors of whom he speaks as "stayers upon the shelf."

14. "O, Let Us Be Joyful," S. M. Crothers, *Atlantic Monthly,* Vol. 118, page 427. "Glad" books, discussed with illustrations from *Mrs. Wiggs of the Cabbage Patch* and *Molly Make-Believe.* The essayist points out one important criticism of weakness.
15. "The Using of Ideas as a Factor in Study," F. M. McMurry, *How to Study,* Chap. VIII. Knowledge must be accompanied by the ability to *use* it. To *apply* what one learns is the goal of education.
16. "Taking Oneself in Hand," John Adams, *Making the Most of One's Mind,* Chap. I. Develops the idea that a student educates himself if he makes right use of his own mental equipment.
17. "How to Become Interested in a Subject," H. D. Kitson, *How to Use Your Mind,* Chap. XI. Interest grows out of a conscious effort to secure information about a subject and to use it.
18. "Literature Can Give You an Outlet," C. Alphonso Smith, *What Can Literature Do for Me?* Chap. I. The entire chapter from which the extract in THE MIND AT WORK is taken.
19. "Literature Can Show You the Glory of the Commonplace," C. Alphonso Smith, *What Can Literature Do for Me?* Chap. V. This chapter insists that poetry has *meaning* first, and *beauty* second. Especially does literature dignify and glorify simple and humble things.
20. "The Wings of the Mind," Hallam Hawksworth, *The Workshop of the Mind,* Chap. IV. A very readable explanation of what imagination means and does.
21. "The Reading of Poetry," John Macy, *A Guide to Reading,* Chaps. V and VI. How great poets differ from poor poets; how the reader's imagination must take long journeys.
22. "The Reading of the Colonial Girl," Constance A. Barnscoat, *Living Age,* 252, Vol. 34, page 220. A study of the books read by high-school girls in the British colonies. Excellent problem to see how many of the books are on your English lists for home reading.
23. "The Reading of the Modern Girl," Florence B. Low, *Living Age,* 249, Vol. 31, page 195. Reading of girls fifteen to eighteen in England. Criticisms of school procedure in teaching literature of twenty years ago.
24. "What Books Do Boys Recommend?" Herbert Coryell. *The Outlook,* Vol. 131, page 645. An interesting account of a classroom experiment in classifying books as "time-killers," "worthwhile books," and books "no one should miss." A suggestion for a Friday Book Club meeting in any class.
25. "Thought and Imagination," Edwin L. Shuman, *How to Judge a Book,* Chap. V. The imaginative power of an author stimulating the imaginative power of a reader, as a test of a good book.

CHAPTER SIX

Evaluating What We Read and Hear

Who reads
Incessantly, and to his reading brings not
A spirit and judgment equal or superior,
Uncertain and unsettled still remains,
Deep versed in books, and shallow in himself.
—Paradise Regained

SECTION I

STANDARDS OF EVALUATION

In earlier chapters we have seen that a careful student reads with a purpose, grasps the author's main thought and subordinate divisions, remembers and is able to reproduce that thought, and supplements it both by raising sensible inquiries and by supplying data out of his own mental stock. In these chapters we have occasionally hinted at another skill by which a careful reader learns to be judicial in his reading, sometimes critical, and occasionally even skeptical about the substance of what he reads, and of the conclusions he is asked to draw from it. In the present chapter this skill is called "Evaluating What We Read."

A few examples of uncritical thinking may emphasize the need of standards of judgment. First we are faced by the fact that the very large majority of us are born into our political beliefs. No one can estimate how many members of political parties today owe their political faith not to any reasoned reflection of their own concerning issues, but to heredity. It is unusual to find a Democratic voter who is a member of a Repub-

lican family, and vice versa. Again, it is affirmed, with at least some foundation, that political campaigns are decided by attractive slogans which catch the ear and tickle the fancy of multitudes of voters. The suggestive campaign motto "The full dinner pail" is said to have won more votes for protective tariff than a thousand campaign speeches setting forth economic theory and bristling with facts and figures. Such slogans sum up the ardent desires of the masses; people blindly believe the implied promises and think that they may be realized. They vote merely on an unreasoning hope!

Another more amusing, even if less important, example of loose thinking is the readiness of many people to believe patent-medicine advertisements. Literally millions of dollars worth of such advertisements appear every year. The story is told that an energetic advertising firm, desiring to prove that skillful advertising will sell any product, made a certain harmless but valueless mixture, put it up in attractive bottles, and advertised it widely. After a year or two the worthless stuff was selling at a neat profit. Then the company, having demonstrated that advertising will sell anything, withdrew the "discovery" from the market. For quack remedies our people spend $800,000,000 annually, consuming more drugs than any other nation of similar size on earth, in spite of the fact that medical experts say that such remedies have little real value.

The need for careful evaluation is emphasized also by the ease with which misleading tales make their way into the newspapers. This is well exemplified by data reported in *The Outlook.*

The following story has appeared in several papers: "Shortly before going abroad last year Sinclair Lewis bought a fancy suitcase for his wife. They used it on a week-end trip up the Hudson and it was stolen on the train. In it was the manuscript of Lewis's new novel. The real tragedy is that Mr. Lewis did not have a carbon copy."

Messrs. Harcourt, Brace & Co., Mr. Lewis's publishers, say regarding this story: "Aside from the facts that the stolen suitcase was not one but two, that they were not stolen on a train up

the Hudson, U. S. A., but at a station in London, that in neither of them was there a single word of manuscript, notes, or any other literary material, that Mr. Lewis always keeps a carbon copy of everything he writes, and that, finally, when the suitcases were stolen he had completed only a small part of the new novel, the story is a triumph of correct details."[1]

In order to evaluate what he reads, a careful thinker needs to consider three matters: (1) he needs to estimate his own fair-mindedness; (2) he needs to estimate the reliability of the writer; and (3) he needs to estimate the value of the facts and the conclusions which he is asked to believe. Even more than a reader, a listener ought to be carefully on his guard. A listener, especially if he is carried away by a speaker's personal force or charm, is likely to neglect to analyze the value and credibility of the speaker's message.

(1) Test your own fair-mindedness.

(*a*) Is your own mind free from personal prejudice? Many people are misled because they never seriously take themselves to task; they never examine frankly and make allowance for the bias that is given their judgments by their own desires and prejudices. They see, read, and hear everything through glasses colored by their own interests or affiliations. Prejudice means literally *pre-judging*. Thus a citizen who is positive that he is overburdened by taxes may *always* be unreservedly hostile to any new public improvements; a blind partisan *always* approves the candidates and policies of his party regardless of their merits. Obviously, a "closed mind," that is, one which invariably applies ready-made but unreasoned judgments to every new issue, is a menace to itself and to society.

Ruskin, cautioning readers to be on guard against these and related weaknesses of their own, gives this pertinent advice:

A little honest study will enable you to perceive that what you took for your own "judgment" was mere chance prejudice,

[1] *The Outlook*, Vol. 132, page 619.

drifted, helpless, entangled weeds of castaway thought; nay, you will see that most men's minds are little better than rough wilderness, neglected and stubborn, partly barren, partly overgrown with pestilent brakes and venomous wind-sown herbage of evil surmise; that the first thing you have to do for yourself is eagerly and scornfully to set fire to this; burn all the jungle into wholesome ash-heaps, and then plow and sow.

(*b*) Are you able to give a fair hearing to people who differ with you? Obviously, it is easy to accept the statements of those who agree with our own general beliefs and principles; and it is hard to realize that in most questions the entire right may not be on our side. To make allowances for reasonable differences in belief and action, to be willing and able to estimate our own cause in the light of opinions which differ from ours is always the mark of fair-minded men or women.

Isaac Watts has this in mind when he says:

Unhappy they that hunt and purvey for a party, and scrape together all those things, and those only who favor their own tenets, while they despise and neglect all the rest! The chief cautions that I design are these three:

i. We should read with a just freedom of thought all those books which treat of such subjects as may admit of doubt and reasonable dispute. Nor should any of our opinions be so resolved upon, especially in younger years, as never to hear or to bear an opposition to them.

ii. When we peruse those authors who defend our own settled sentiments, we should not take all their arguments for just and solid; but we should make a wise distinction between the corn and the chaff, between solid reasoning and the mere superficial colors of it; nor should we readily swallow down all their lesser opinions because we agree with them in the greater.

iii. When we read those authors who oppose our most certain and established principles, we should be ready to receive any information from them in other points, and not abandon at once everything they say, though we remain well fixed in our opposition to their main point of arguing.

(2) Test the writer's or speaker's reliability.

When sure of your own fair-mindedness, test the writer's or speaker's reliability by asking questions about him:

(a) What is known about his honesty? What is his reputation? What is his purpose in writing or speaking? Would he observe and report fairly all facts that might conflict with his own interest? What has he himself to gain or lose by the decision upon the issues raised? These are fair questions to ask concerning the writers of all articles in the public press, whether signed or unsigned.

The fact is that people do most of their writing and speaking for enterprises in the success of which they personally have an interest. This is perfectly proper; but the trustworthiness of their arguments may be questioned just in proportion to their honest willingness to see and report facts which are not fully in accord with their beliefs.

The extent of caution that should be exercised in applying this test is indicated by the weight which is generally attached to hurtful testimony. If a witness testifies to a fact which is clearly and unmistakably against his own personal or family or business or party interest, which harms his own cause, he is making what is called a "hurtful" admission. Such hurtful admissions are usually considered reliable evidence. If this is true, caution should be used in the case of "helpful" statements.

(b) What experience has the author had in the subject about which he speaks? Is he a recognized authority? Is he dealing with a set of conditions familiar to him? Or is he speaking about matters to which he has recently been a stranger? Here we face a very common danger in the public press. Unfortunately, men whose names have unquestioned weight in their own specialties frequently express opinions and make criticisms in matters quite foreign to their own lines of expertness. The public, recognizing such men as authorities in their own specialties, is likely to give

undue weight to their opinions in fields about which they know very little. An Edison in science, a Burbank in horticulture—such men's statements may be accepted as final in the fields to which they have devoted a lifetime; but these very men themselves would hardly claim to be experts in city government, politics, or religion.

(c) How authoritative are the sources of information upon which the writer or speaker has relied? Everyone knows how gossip spreads from mouth to mouth, growing a little stronger with each new repetition, until a tale reaches proportions that may do great harm. Obviously, "With what definite information did that story begin?" is always a pertinent question; and in matters more important than personal rumor, the same principle of caution applies. In scientific fields, direct observation and data recorded from reliable experimentation are always necessary for final accuracy. In historical subjects, "original documents" are demanded. Hearsay, guessing, conjecture, mere assertion, are always thrown out of court.

(3) Test the credibility of the statements themselves.

Very often the statements themselves contain internal evidence that may throw some light upon the credibility of the matter in hand.

(a) Are the statements presented quietly, moderately, and in a dignified manner? There is often a close connection between the way in which ideas are presented and the reliability of the ideas themselves. A quiet, dignified, straightforward, frank statement of fact or opinion carries a presumption of reliability. On the contrary, a loud, flowery statement, expressed in high-sounding phrases and garish terms, carries with it a presumption of unreliability. Most of the great truths of life are capable of being stated simply and without adornment.

(b) Do the statements agree with other established facts and conclusions? The outstanding example of the use of this test is

found in an *alibi*. If there is some fact, true beyond all doubt, which is quite inconsistent with certain other facts or conclusions which you are asked to believe, great doubt is thrown upon the latter. A man cannot have been guilty of a physical act in California, if, at the known time of that act, he was in New York. The charge is inconsistent with known facts. If you hear commended as great literature a poem written by someone whose other poems you know to be quite mediocre, your common sense makes you hesitate to believe the commendation. The alleged fact is quite inconsistent with other specific facts which are known to you.

(c) Are the statements in accord with the knowledge of ordinary human experience? After all, our own general acquaintance with everyday life, based upon such contact as we have had with human experience, may be the best safeguard for our thinking. Do we read or hear that a candidate for high office is a drunkard, a defrauder, a wife-beater? Do we come upon some other serious charge against him? If so, even if he is not the candidate of our own personal choice, we must hesitate to accept extravagant criticism lodged against him. We must be thus skeptical, because it is not in accord with everyday experience that a man should rise to the candidacy for a high office if he is himself a degenerate.

CLASS ACTIVITIES

Topics for the Class Round Table

1. Try to give other instances of careless or loose thinking?
2. Give examples of the ease with which people are duped by misleading advertisements.
3. Distinguish between *manner* and *matter* in an address you have recently heard; between *form* and *substance;* between *style* and *content*. Apply Watts's "the corn and the chaff" (page 242) in your reply.

4. Translate Ruskin's term "wind-sown herbage" into one word of everyday usage that stands for one of our very common social faults.

5. Why is a "hurtful admission" usually considered credible evidence? Under what conditions might such admissions be wholly incredible?

6. What outstanding examples from American history can you give of the fact that the very great truths are often stated simply and without adornment?

7. Name a few public issues which need to be decided in your community. Have you "an open mind" upon them? If you were to cast a ballot tomorrow, upon which of these issues would you be likely to make a pre-judgment? Why?

8. What is meant by "suspended judgment"? Name a public question and a school question upon which your judgment is suspended.

9. Name a question upon which you have changed your mind. Explain what evidence caused you to change.

10. Give an example of an exaggerated statement, unaccompanied by evidence, which you have recently heard.

Research Problems

1. Examine the magazine records of the alleged discovery of the North Pole by one Dr. Cook during the years 1909-14. Determine on what basis Cook's claims were considered unreliable. Report.

2. Examine Walter Lippmann's article in *The Atlantic Monthly,* Vol. 124, page 779, entitled "Liberty and the News," and report its substance to the class.

3. Examine reports of the same public happening in two different daily papers. Choose one paper that has the reputation of conservative and accurate statements; select another paper of the opposite reputation. Explain your findings to the class.

4. Examine all the headlines in one issue of a daily paper. Determine whether any of them tend to exaggerate, or wrongly interpret the facts as set forth in the accompanying articles.

5. Make a searching examination of recent issues of your student daily. Find evidence of its fairmindedness and honesty of statement. Present your evidence.

SECTION II

HABITUAL ACCURACY IN OBSERVATION AND STATEMENT[1]

CHARLES W. ELIOT

Reading Suggestions

1. Read the severe indictment made by Dr. Charles W. Eliot against the loose thinking which he says characterized the American people during the World War. The war time was especially appropriate for misleading propaganda.

2. Supply from your own experience some concrete data for each of the directions and questions printed in italics.

Since the United States entered actively into the war there has been an extraordinary exhibition of the incapacity of the American people as a whole to judge evidence, to determine facts, and even to discriminate between facts and fancies. This incapacity appears in the public press, in the prophecies of prominent administrative officials, both state and national, in the exhortations of the numerous commissions which are undertaking to guide American business and philanthropy, and in the almost universal acceptance by the people at large, day by day, of statements which have no foundation, and of arguments the premises of which are not facts or events, but only hopes and guesses.

PROBLEM. *Report a statement that had no foundation.*

It is a matter of everyday experience that most Americans cannot observe with accuracy, repeat correctly a conversation,

[1] Reprinted by personal permission of Charles W. Eliot from "Defects in American Education."

describe accurately what they have themselves seen or heard, or write out on the spot a correct account of a transaction they have just witnessed. These incapacities are exhibited just as much by highly educated Americans as they are by the uneducated, especially if the defects of their education have not been remedied in part by their professional experience.

PROBLEM. *Give a case of one of the weaknesses named.*

The physician, the surgeon, and the public health officer often escape these defects because their whole professional training and experience develop in them keen powers of observation and reasoning—powers which must be generally accurate and trustworthy if professional success has been attained.

Some men whose education ceased at fourteen acquire through experience in their trade powers of observation and correct inference which professional men whose education was continued to their twenty-fifth year never acquire. It is the men who have learned, probably out of school, to see and hear correctly and to reason cautiously from facts observed, who carry on the great industries of the country and make possible great transportation systems and international commerce.

PROBLEM. *Why must a surgeon be accurate in his thinking?*

Eight years ago Mr. George G. Crocker, a lawyer, who had been for several years Chairman of the Boston Rapid Transit Commission, and in that capacity had been much interested in the lawsuits which grew out of accidents in the tunnels under construction, contrived an instructive experiment on the accuracy of the testimony of bystanders. He invited twenty highly educated gentlemen, all of whom had been successful in their several callings, to witness a brief scene enacted close to them by four actors in about one minute, and to write out immediately, each for himself, a description of what he had seen and heard. Three of the twenty witnesses did not attempt to write out what they had just seen and heard at close quarters. Of the other

seventeen no two agreed as to what happened before them, and no one gave a description which was even approximately correct. The group contained one judge, one civil engineer, four business men (active), three business men (retired), and eleven lawyers. Whoever will try a few analogous experiments on groups of his acquaintances will soon learn to distrust all tales which have passed from probably inaccurate mouth to inaccurate ear and on through a series of incompetent transmitters.

PROBLEM. *Be ready to submit plans for a similar experiment in your class.*

The remedies for the evils described have already been worked out in a few schools and in the elective courses of some colleges and universities. It remains to apply these remedies universally in all the schools of the United States. These remedies are the substitution of teaching by observation and experiment for much of the book work now almost exclusively relied on; the cultivation in the pupils of activity of body and mind during all schooltime —an activity which finds delight in the exercise of the senses and of the powers of expression in speech and writing; the insistence on the acquisition of personal skill of some sort; the stimulation in every pupil of interest in his work by making the object of it intelligible to him, whether that object be material or spiritual; the inspiration in every child of tastes and sensibilities which he can use to promote actually his present enjoyment and therefore in all probability his future happiness; and finally, the persistent teaching of every pupil how facts are got at in common life, how to make an accurate record of observed facts, and how to draw safe inferences from well-recorded facts. Every boy and girl in school should learn by experience how hard it is to repeat accurately one short sentence just listened to, to describe correctly the colors on a bird, the shape of a leaf, or the design on a nickel. Every child should have had during its school life innumerable lessons in mental truth-seeking and truth-telling. As things now are, comparatively few children have any direct lessons in either process.

PROBLEMS. *Name the activities of your school which accomplish these results.*

What outstanding lesson in this course do you think most valuable in this respect?

It is for the colleges and universities of the country to lead the way in working out these serious changes in the prevailing methods of American elementary and secondary schools. It will not be possible to bring them to pass immediately in American public schools, because it will be found necessary to provide on a large scale a new sort of teacher for the free schools, and much new apparatus. There will doubtless be found some teachers already in service who will gladly promote the adoption of the new methods. Finally, the successful adoption of the new methods will not involve the exclusion of book work, the ceasing to cultivate literary and artistic taste, or the reduction of the teaching of history, biography, and the fine arts.

PROBLEM. *Does this course fall in line with Dr. Eliot's suggestions?*

CLASS ACTIVITIES

1. Discuss your answers written in response to the problems and questions. By class discussion, select the best reply in each case.

2. Choose the most promising suggestion made in response to the fifth problem. Put it in the hands of a committee, the suggester acting as chairman, for a trial at some later date. Have the committee invite your principal, or some other school officer, to be present on that occasion.

3. Another experiment to test ability is to write out on the spot a correct account of a happening you have just witnessed. Have three or four of the boys carefully plan a very brief imaginary scene after a game in which their athletic team has been defeated, one boy to be charged with the loss of the game. Some other scene of a similar nature may be chosen. Let the action and dialogue be very definitely planned, written out, memorized, and practiced beforehand. After the scene has been presented in class, the rest of the class may attempt to write out exactly what was said and done.

SECTION III

PITFALLS IN THINKING, PART I

Reading suggestions

1. Named and illustrated in this and the following discussion are eight errors in thinking frequently made by ignorant or careless people. If you can recognize these errors when you read or hear them, you will avoid a considerable portion of the mistakes which characterize the reasoning of many people.

2. Study this discussion with the firm resolve to understand each error here named. Try to fix it in mind by closing your book after each of the divisions and by repeating aloud one of the concrete examples cited. Then, speaking very distinctly, pronounce aloud the name of the fallacy illustrated; try to add one example of your own.

THE NEED OF CARE IN READING

This discussion attempts to set forth, by means of simple illustrations, four of the most common mistakes in reasoning. It reduces to lowest terms some of the twists of thought which lead from sound evidence to false conclusions, and presents definite tests which will assist in detecting the errors.

Little discussion is needed to show the immense value of being able to recognize errors in thinking. Such ability means that a reader or listener can be constantly on his guard, refusing to accept the conclusions of writers and speakers whose arguments are faulty. A large share of our information comes to us second-hand. As individuals we are able to have personal contact with

a comparatively small part of life. For knowledge of the great busy world about us we must depend upon the observations of other men and women, upon their reasoning powers, and upon their ability to report accurately and without prejudice their observations and conclusions.

Dependent as we are upon others for information, we need to remember also how likely everyone is to fall into error. Two honorable men, each desiring to tell "the truth, the whole truth, and nothing but the truth," may quite frequently give almost exactly opposite accounts of happenings of which they have been eyewitnesses. Moreover, many honest people "see things not with their eyes, but with their prejudices"; and unfortunately, not all men are scrupulously upright. Against the reports of such men we must constantly be on our guard.

Moreover, people differ radically in drawing conclusions from the same facts. How often we find rivals drawing from the same statistics directly opposing conclusions. There is a misleading saying that "figures will lie." Figures themselves cannot lie; but by the mistake or by the intent of the one using them, figures can easily be twisted out of their true meaning. Men's inferences from figures sometimes falsify. Thus, in this old saying, "Figures will lie," we attribute to the facts a tendency to error which really belongs to the faulty inference-drawing powers of men and women. Someone has facetiously remarked that figures won't lie, but liars will figure.

And it is not only in helping us to guard against the erroneous thinking of others that this discussion may be of assistance. Every day each one of us is reporting observations that he himself has made, arguing from evidence that he has accumulated, trying to convince and persuade others of the wisdom of certain lines of action. Obviously, if one wishes to be a trustworthy leader, he needs to know how to guard his own writing and speaking against errors in thinking.

Four very common fallacies, the dangers of which are presented in this section are:

(*A*) Thinking by false analogy.
(*B*) Thinking by hasty generalizations.
(*C*) Thinking by incorrect causal relationship.
(*D*) Thinking through ambiguous terms.

(A) The Danger of False Analogy

Abraham Lincoln, urged by his political advisers to change some of his policies in the midst of a campaign, denied their request, saying, "Gentlemen, I don't believe in swapping horses while crossing a stream." He was expressing his thought by analogy. A few years ago there was in the air a phrase, "You can't unscramble eggs," used to indicate that many small concerns cannot be separated after they are once combined in a trust. This also is an analogy.

Such examples suggest both the strength and the weakness of this form of thinking called analogy, or resemblance. The strength lies in the fact that the meaning of an argument is made clear by definite, homely figures of speech. The scrambling of eggs, the inconvenience of trading horses when fording a river, are such everyday affairs, or at least their meaning is so clear, that everyone can understand them. The chief value of an analogy is to make the speaker's meaning unmistakable.

Useful as analogy is in making the meaning vivid, it is nevertheless a dangerous form of thinking. While there may seem to be similarity between the two things compared, the resemblance may not be at all close or exact. The catch phrase, "You can't unscramble eggs," is really no proof that trusts cannot be dissolved. When one examines closely the process of scrambling eggs he finds that in the resulting mixture the constituent parts of the eggs have all been changed chemically and inextricably mingled together. On the contrary, even after a combination is made, the parts in a trust remain physically separate; the scrambling in this case is merely in the form of a legal merger. The various lines in a railway trust are physically as separate after the scrambling process as they were before it. The danger

is that because anyone is certain that eggs cannot be unscrambled, he will carelessly carry over into an entirely different realm an inference which by no means is equally certain.

This is true of other familiar examples of reasoning by analogy. Before adopting the vigorous exercise that has made our friend well, we need to know to what extent our malady is like his, and whether we have the same leisure, the same equipment, the same motives for exercise. In other words, both his illness and his treatment must very closely resemble ours to make our logic probable. Mr. Wanamaker possessed something more than poverty; he had something inside him that helped him get his start. Mere similarity to him in poverty is no sign that we shall get on. We must have the rest of his equipment, or at least the essential parts of it. To liken education to the unfolding of a flower is all very well. When you come to examine the analogy closely, you must remember that lilies in unfolding "toil not, neither do they spin." But this is no indication that a student will develop in school if he neither toils nor spins. To test an analogy, then, beware of figures of speech. They make the meaning clear and if properly chosen are of great value in this one respect; but they do not prove. Always ask: *Are the two units compared alike in all points that are essential to the comparison?*

(B) The danger of hasty generalizations

A generalization is the process of thinking through which one reaches a general conclusion by examining a number of particular instances. For example, after studying the batting percentages of a large number of league outfielders, you arrive at the general conclusion, "Outfielders in a major league are strong batters." By a similar process you reach the conclusion that pitchers, as a rule, are poor batters. Again, such old proverbs as "Honesty is the best policy," "The early bird catches the worm," "Early to bed and early to rise makes one healthy, wealthy, and wise," are figurative statements of common truths, usually accepted as reliable because hundreds of examples can

be brought forward to prove them. Many accepted principles of human belief, of conduct, or of action—the so-called "axioms" of life—are in reality based on this process of thinking called generalization.

This common form of reasoning needs to be guarded carefully, because it is almost impossible to reach a perfect generalization, that is, one based on all the possible examples. About the only absolutely perfect generalization of wide scope outside the field of the exact sciences is the statement "All men are mortal." We can rest reasonably sure that this is unquestionable; human experience does not record one person who has not proved this truth sooner or later. If perfect generalizations are unusual, we can test the accuracy of imperfect ones by asking two questions:

(1) How many instances have been observed and cited? Suppose we desire to test the statement, "Office boys are likely to rise high." This has an appealing sound. We hope that it is true; and we know that to start as an office boy certainly does not prevent success. Everyone can cite the instances of Mr. Wanamaker, Mr. Rockefeller, and Mr. Ford, and of someone nearer home. Now pin the statement down by the question: How many instances have been observed? You will find that of all the men who started in business very humbly, you really know only a very few who have risen high. Of course, the fact that you know very few does not disprove the generalization, but it ought to make you hesitate to accept the conclusion without reservation. You need to consider the relative size of the unobserved class. The first test of a generalization is, then: What is the number of instances examined? How many of the possible cases have been observed?

(2) Are the instances cited fair and typical? This is the second test to be applied. A few years ago a certain daily published each fall a list of players hurt in football, and reached the conclusion that the game is brutal and dangerous sport. One year the number of fatalities ran unusually high. But upon investiga-

tion it was found that almost all the men in one particular squad were included in the list of fatalities. On the way to a game, the train in which they were riding was wrecked, and many of the players were killed. To include those men in the list and to attribute their fatalities to football was obviously an unfair use of untypical examples.

In thus recognizing the danger of making generalizations, we are by no means to conclude that they are to be avoided or abandoned. In fact, many of our judgments are rightly based upon reasoning of this order. A well-known automobile company advertises very effectively, "Ask the man who owns one." Reputable schools and colleges rely upon the fact that education means fitness to take a place of high usefulness in life, and to that end point to the records of their graduates. Thoroughly reliable investment bankers cite fifty years of activity without the loss of a dollar to any investor. Similarly, in innumerable ways, legitimate arguments from example are advanced, the conclusions from which are generalizations which possess a high degree of reliability. The point in hand is merely a caution to the careful thinker; in every important issue let him apply the two tests: How many cases have been observed and cited; are the instances so reported fair and typical cases?

(C) The danger of incorrect causal relationship

Another common form of argument is based on causal relationship. If you see smoke arising in the distance, you know that it is the effect of a familiar cause. You reason from the smoke, the effect which you see, back to a known cause, the fire which you do not see. Conversely, if a fire is neglected in a dry forest, the result may readily be predicted. In the latter case, having the cause, which you recognize and understand, you reason forward to the effect.

If a man sees a rapidly moving funnel-shaped cloud twisting and turning on itself, he thinks: There is a cyclone cloud; and in his imagination he can see houses and barns and fields laid

waste. Conversely, if in passing a countryside, he sees signs of havoc—trees uprooted, animals killed, and crops destroyed—he reasons from these effects back to a known cause—a cyclone cloud.

These examples show that the argument based on causal relationship involves the thinker's previous experiences. He establishes this form of reasoning by observing the relationships between causes and results. He learns to predict causes and results in terms of the observations he has made.

Reasoning by causal relationship is common in political controversies. Who has not heard parties accuse the other of being the cause of hard times? It is amusing to recall the opposing arguments about the responsibility for a panic. The Republicans attributed the panic of 1893 to the election of Cleveland; and the Democrats insisted that responsibility lay with the four years of Republican rule which immediately preceded Cleveland's term. In all probability neither position was sound. Hard times come, not from any single cause—certainly not from a change of political administration—but from a large variety of contributing causes. Some economists suggest that periods of business depression come periodically as the result of the natural accumulation of business errors, or from a lack of public confidence, or from crop failures, or from overspeculation, or from extravagant living, or from other causes. The point is that any large result like a financial panic, which is in all likelihood the product of many causes, ought not to be attributed carelessly to a single cause, although that single cause may have contributed to the result.

In this class of errors fall many patent-medicine advertisements; for example, the "before-and-after-taking" pictures of hair-restorers, of consumption cures, of fat-reducers, of youth-renewers, and the like. Suppose that Mrs. X. consents to show photographs when she weighed 300 pounds, and again when she weighed 225. Between the dates of these likenesses she has consumed twelve large bottles of weight-reducer. During this interval, perhaps a year has elapsed. All sorts of causes may have

been at work to reduce her weight. She may have been taking more vigorous exercise, she may have been eating more suitable food, or less of it, she may have been under peculiar mental conditions affecting her physique. Now, any or all of these causes may have assisted the patent medicine in the reduction of 75 pounds. Indeed the loss of weight might have occurred in spite of the medicine rather than because of it.

Consider the argument, "College education makes men successful." This is often supported by imposing figures from *Who's Who in America,* the book containing the names of the most prominent Americans. Now, the general statement may be true that a large number of prominent successful people today are college graduates. It is true. But the inference that they are successful *solely* because of their college education needs to be scrutinized carefully. Granting that a college education probably helps one to become successful, there are other conditions that are even more essential than education by books. A man must have the chance to succeed; he must have the native ability; he needs a certain amount of health, of good fortune in general. These and many other causes or conditions must be present in most cases of success. Indeed, one is inclined to believe that sound thinking will often attribute both college education and success to the same causes rather than assign the one as the result of the other. For example, the son of a wealthy manufacturer will be given a college education, and he will be taken into the firm upon graduation. Soon he becomes known as successful. Both the success and the education are largely due to the start he had. Another boy washes dishes to earn his education; then he begins at the bottom of a business firm, and by sheer ability pushes his way up. Is it not sensible to say that both his education and his success are largely the results of his native stuff, his manhood?

From these cases we can see that the argument based on causal relationship if carelessly used is treacherous. The careful thinker asks of every such argument two questions: *(1) Is the cause as-*

signed sufficient in itself to produce the alleged result? (2) Are there other causes which contributed to the result which is here assigned to a single cause?

Again, as in the cases of analogy and of generalization based upon examples, it needs to be said that arguments which involve the relations between causes and effects are exceedingly useful and very frequently are reliable. Usually several closely related causes operate together. Inadequate coaching, lack of opportunity for practice, unfaithful observance of training rules, inferiority in weight or speed, any one of these causes actually decides the victory in many football games. Reasonable intelligence, persistent and faithful study, alert attentiveness, the willingness to go beyond assigned tasks—these are undeniable causes of good scholarship. Just so in all affairs of life, causes, multitudes of them, are operating. A good thinker is one who, by applying the tests which we have named, is able reasonably to safeguard both what he reads and hears and what he says and writes against the many dangers which lurk in this field of reasoning.

(D) The danger of reasoning through ambiguous terms

Ambiguous terms are words and phrases that have two or more meanings. The danger of error lies in assuming that a term actually means what upon a surface examination it seems to mean. This can most easily be explained by illustrations.

A few years before the World War a famous American made an extended trip around the world. He returned to the United States full of enthusiasm for the rapid growth in all countries of the power and influence of the common people. He saw the signs of popular uprising in Russia; he found the agitation for wider suffrage in England; he witnessed the progress toward democratic government in China; he observed the social revolution in Japan; everywhere this man saw spreading a great popular movement for human rights. Of course, as a good American he heartily approved this tendency toward a wider democracy, including in this term all that it means in its broadest sense.

Obviously, however, he committed a serious error, when upon his return he went up and down the land telling the young men that if they wanted to be in line with a world-wide democratic movement they must identify themselves with the Democratic party. His mistake lay in using as identical the terms "Democracy" and "Democratic party." In the large sense the Republican, the Socialist, and the Progressive parties are just as devoted to Democracy as was the Democratic party. Indeed, the seeming similarity of the title of the last-named party to the term "Democracy" is in itself no argument that this party has a monopoly of devotion to that great principle.

The caution to be exercised by one who would guard against the danger now under consideration is this: Be certain that every technical term and every term of doubtful meaning is most clearly defined in your own mind; make certain that all participants in a discussion have in mind exactly the same kind of "old age pension," "honor system," "income tax," "reciprocity with Canada," "increase in the navy," "commission government," or any such term that has a doubtful meaning.

CLASS ACTIVITIES

Exercises

1. Point out the possible errors in these statements or arguments:

   (*a*) Successful Americans have their names placed in *Who's Who in America.* A very large percentage of the people there named are college graduates. Hence a college education makes for success in life.

   (*b*) "European nations are militaristic."

   (*c*) Americans are superior to other peoples.

   (*d*) The Chinese may be judged by the coolie laundrymen of a community.

   (*e*) "Wealth" means money or worldly possessions.

   (*f*) All demands of organized labor are radical.

   (*g*) All actions of capitalists are conservative.

(*h*) A party chief is to be held responsible for all the acts of his party.

(*i*) Competition is the best means of selection because the ablest men always rise to the top.

(*j*) A boy said that there were two high schools in his town, the "epidemic" and the "vacational"; he preferred to attend the latter.

2. Bring to class a paragraph including an argument which in your opinion exemplifies one of the four errors of "Pitfalls in Thinking." Let each student read his paragraph aloud in class. Each student should make entries on a sheet of paper for all the paragraphs as follows:

1. James. False analogy.
2. Mary. Incorrect cause.

3. Make upon the board a list of topics concerning which, for reliable information, most of the people of your city are absolutely dependent on others.

4. How do the voters of a large city form their estimates of candidates whom they cannot possibly know? What helpful means of publicity is there in your community?

5. Report a set of facts in the current life of your school about which there are two quite different interpretations.

6. Is a man who thinks he is arguing correctly, but whose reasoning is faulty, free from responsibility? Can he be charged with a breach of ethics? Give an example.

7. "John studies hard and receives good marks; if I study hard I shall receive good marks." Name circumstances in which this thinking would be sound; name others in which it would be questionable.

8. Secure a volume of Wendell Phillips's addresses. Locate his address on "Toussaint L'Ouverture." Read it to see how he uses figures of speech to make his meaning plain. Consider whether he uses these figures of speech as arguments, and if so, whether they are conclusive.

9. Consider the paragraph on page 258 about college education and success. Recall Mr. Foster's selection in Chapter I, page 36. Is there inconsistency between the two portions of THE MIND AT WORK?

10. Define the terms "literary society," "honor society," "fraternity," "school club," "dramatic society," to show how confusion of meaning

might easily result. In a certain legislature one "up-state" representative opposed a bill to abolish secret "fraternities" in the state university because he, forsooth, believed heartily in "literary societies"; he made a long speech defending such societies. Explain his error.

11. In another state legislature one man argued that the state university might very well discontinue all but a few of its courses. "Why," he said, "I was a student there ten years ago and I couldn't take all the courses they offered at that time. Now they have three times as many." What error in thinking did he commit?

12. Can one have an intelligently developed prejudice? Remember that *prejudice* may mean *pre-judging.*

13. Name and discuss some prejudices, both good and bad, that are current in your community.

14. Apply the figure of unscrambling eggs (page 253) to the problem of fixing the boundaries of European nations at the close of the World War.

15. Mathematical axioms like "Things equal to the same thing are equal to each other" are statements of perfect or indisputable generalizations. Why is it difficult, if not impossible, to establish similar axioms in regard to human relations?

16. Why are baseball pitchers usually poor batters? Why are outfielders usually good batters?

17. There is an old statement, "The exception proves the rule." In this sentence the word "proves" has a meaning which we seldom give to it. The exception *tests* the rule would be more accurate. Try to illustrate how one exception may test, but not prove, a rule. Suppose, for example, the boys on your football team are good students, all but *one.* The rule is "Our football team is made up of good students." The one boy is the exception that *tests* the rule. Can you think of similar examples?

18. Find instances in which like effects do not have like causes; vice versa, instances in which like causes do not produce like effects.

19. What is the danger in using as questions for debates: "Washington was a greater man than Lincoln"; "Physics is a more interesting study than Latin"; "Athletics advertise a school more than scholarship"; "A commercial course is better than a classical"; "Practical subjects are better than cultural"?

SECTION IV

PITFALLS IN THINKING, PART II

Reading Suggestions

1. Without turning back to Part I of "Pitfalls in Thinking," test yourself by enumerating the names of the four fallacies there discussed. Write down the names of the four, and after each jot down catchwords indicating the outstanding example you recall from your class discussion.

2. Part II adds four other common errors:

(*E*) Thinking based on unsupported assertion.
(*F*) Thinking based on objections.
(*G*) Thinking "beside the point."
(*H*) Thinking that shifts ground.

Study slowly, trying to supply at least one example of your own for each of the errors.

(E) The danger of unsupported assertion

An unsupported statement carries no weight except when made by an authority. A statement made by Thomas A. Edison in the field of electricity is final for the average person. An authority has spoken. Conclusive and convincing also may be considered a statement of Luther Burbank in the field of horticulture. He is an authority for most people. But if either Edison or Burbank should express an unsupported opinion about a subject like banking or some method of conducting the public schools, he would in all probability be talking about a subject upon which he cannot be considered an authority. A careful thinker will refuse to accept such opinions, even coming

from well-known men, unless they are supported by facts and reasons.

The danger arising from this source lies just here: Most of our information comes from reading or from hearing others talk. No one has opportunity to learn by personal observation many of the actual facts in the big life about us. We have to rely upon the statements of others. Moreover, we get our information largely from people who believe as we do. If we are Socialists we read the Socialist press. If we are Democrats we peruse the Democratic press; Republicans, the Republican press. Add to this the fact that the public enjoys reading and hearing what it already believes. Knowing this, newspapers and speakers very often cater to the taste of their own special reading public. They state as facts things that they know their readers would like to believe.

Two newspapers reported a speech of a certain senator. The paper opposed to him asserted that the galleries of the Senate Chamber were almost empty, that senators gave but indifferent attention, and that the effect of his speech had been discredited beforehand by the action of his opponents in withdrawing certain details of the bill. The paper friendly to the senator in reporting the same speech gave its readers exactly the opposite impression. It asserted that huge crowds thronged the galleries, that senators gave careful attention, and that the withdrawal of certain details of the bill had been done in fear of the senator's attack. Each paper represented the facts in the light that best fitted in with the editorial policy of the paper and which in all likelihood best suited the desires of its readers. Thousands of readers thought they had reliable information. Who can say what the facts of the case really were?

If, then, we are not to accept the unsupported assertion of any man unless he is an undoubted authority in the field in which his statements lie, it behooves us to have tests by which we can determine an authority. This we can do if we ask the following questions:

1. Who wrote this article I am now reading?
2. Who is the man who made the statement?
3. Did he have a good chance to make complete observation?
4. Is he capable of observing accurately what he reports?
5. Is he capable of forming, from carefully observed facts, expert judgments in the subject under discussion?
6. Has he a personal ax to grind? Is he prejudiced in the matter?

(F) The danger of raising objections

Did you ever stop to think how easy it is to raise objections? Any serious proposal involves some difficulties to be overcome. Moreover, there are always plenty of people who see these objections and vigorously point them out. The world is full of chronic "objectors." The point to remember is that merely raising objections against a program does not necessarily imply that the proposal ought to be rejected.

To illustrate: Suppose that it is proposed in a certain township to abolish all the one-room rural schools and to substitute in the center of the district a graded consolidated school. Immediately, people will begin to object on the grounds (*1*) that the plan will cost too much, (*2*) that some pupils will have to walk too far, and *(3)* that farm lands near which the district schools are placed will diminish in value.

Now, these objections may or may not be valid. Grant for a moment that they are valid. A careful thinker says to the objector, "Over against these possible objections let us balance the advantages which are said to follow consolidation: (*1*) The central building will be more sanitary, (*2*) the teachers will be more highly trained, (*3*) the school equipment will be more adequate, (*4*) the school will be far better graded." The careful thinker continues: "Now, we have on the one side certain advantages and on the other side certain objections. It is my business to do three things: (*1*) to convince myself that the positive advantages will follow, (*2*) to determine how serious

the objections are, and (*3*) to balance the good and the bad over against each other in order to find where the greater weight of desirability lies."

To be remembered also is the fact that the advocate of a new movement must not content himself merely with pointing out the advantages of his proposals. It may very well be the case that all the advantages he claims for his plan may be admitted and still some insuperable objection may render his scheme untenable. A parcel post which would drive all local merchants into distress, or into bankruptcy, would be undesirable, whatever its possible advantages. The zone charges in our present system, supposed to give local merchants an advantage in local markets, were the result of an effort to meet such an objection.

Any debatable question has two sides; there is truth both for and against. Do not, therefore, lend an ear to the advocate who gives his opponent no ground upon which to stand. Avoid giving your credence to the man who does not give the other side a chance. Listen to the man who asserts that, weighing the good and the bad on both sides, giving all interests a fair show to speak for themselves, he believes that his side has the greater amount of good and the less of evil.

(G) The danger of arguing "beside the point"

What is the real meaning of the expression, "He is talking beside the point"? How can a man be defending, let us say, the closed shop, and still be "beside the point"?

If a man argues that the closed shop infringes upon the right to work there, when, and how one chooses, the reply is sometimes made, "Closed shops secure shorter hours."

If he contends that the closed shop is monopolistic in principle, that it applies to labor the same limitations which individual monopolies are said to apply to their products, he meets with the reply, "The closed shop secures better wages."

Note that in both cases, instead of making reply to the question raised, the advocate of the closed shop has dodged the point. He has not attempted to answer the question, but has gone off on

one of his stock arguments. Of course shorter hours, better wages, and more sanitary conditions are powerful arguments in behalf of the closed shop; they may even be considered the very heart of the question. The illustration is advanced to show that even with an entirely legitimate and sound argument, a writer or speaker may be failing to talk upon the issue which, for the moment, has a right to the center of attention.

This form of error appears frequently in the speeches and writings of various kinds of reformers. Let us say that the speaker believes in compulsory insurance for workingmen. He believes that the burden of accidents ought not to fall upon the injured workman, but ought to come out of the profits of the industry itself. Well and good. There is no reason why he should use all his time, or any large share of it, in showing the rapid growth in the number of accidents in mines, on railways, and in manufacturing establishments. There is no reason why he should spend any large amount of energy in recounting the hardships of an injured man and his family, when accident stops his earning power. Both of these lines of thought are appropriate. It is quite possible that they need to be suggested; but a moment's reflection ought to tell the speaker that a thoughtful audience will accept such points with no extended argument. He ought, therefore, to dwell upon them but very briefly. He ought to pass to points upon which real difference of opinion is possible. In short, he is guilty of being "beside the point" whenever he wastes time on unessentials, thus failing to save his main strength for the vital issues.

More frequently than in any other form, this error of arguing "beside the point" appears in the common practice called "mud-slinging"—heaping personal abuse on an opponent. Frequently in campaigns, when speakers are unable to talk upon the real issues, they pour out slanderous remarks about the personalities of their opponents. And it used to be a common saying in lawsuits, "When you have no case, abuse the other attorney." Such by-play is usually "beside the point." Be suspicious of such a writer or speaker.

(H) The danger of shifting ground

"As slippery as an eel," runs the old saw. Many writers and speakers rival the eel in slipping out from under a hand that attempts to pin them down. They glide skillfully from one argument to another, insinuating, "Well, if you object to that last point, let us consider another. Now, even if you do not accept the second argument, please lend your ear to my third contention." Such men are especially gifted in the shifting process when brought face to face with an opponent who attempts to pin them down to definite arguments.

A certain township in a Middle-Western state was considering the advisability of abandoning all the one-room rural schools and substituting for them a consolidated school. Opposed to consolidation there was a vigorous gentleman whose arguments constantly shifted ground. As most opponents of any new scheme are likely to do, this man began by arguing that the plan would cost too much. He said that the value of farm lands near the small schools would decrease when the little buildings were removed. But by interrupting from the floor, someone showed that this argument is weak; that to have a larger consolidated school two miles away adds more to the value of a farm than to have a poor school on the corner of your farm.

Smilingly, the opponent of consolidated schools slipped out of this untenable position into a second. He said the value of farm lands would diminish, because the taxes would be much higher in order to sustain a consolidated school. Then it was pointed out to him that, granting quite a large initial expense for the new building, the running expenses over a period of ten years for one large building would be less than for eight small ones; that four teachers, even if paid more, could be employed for less than eight teachers under the old one-room system. Driven out of this position, the debater sought refuge in a third. He contended that it would cost too much to transport the pupils in wagons or busses to the new building. To this, reply was made that only four wagons would be necessary; that four of the

largest school-boys could drive the wagons; and that for the larger part of the school year, teams for the busses could be secured very cheaply. With seemingly little reluctance, the opponent of consolidated schools abandoned even this third point and turned to other arguments.

This is a good example of shifting ground. Pressed hard in one position, the speaker or writer shifts from the original argument he started to support, to a second, thence to a third, and so on, easily rivaling the eel.

This exasperating practice ought to discredit any speaker or writer. One ought to be sure that he knows what the vital and important issues in a case are, and he ought to stand squarely for them. From his position he should refuse to be driven. It is a safe rule, usually, to give your credence to a writer or speaker who fights it out on one line "if it takes all summer." Of course, this does not mean that he merely goes over and over the same ground. It means that he presents new evidence and more convincing evidence, on essential points that seem not yet to have been firmly established.

Conclusion

If you have been interested in this discussion of eight very common forms of errors in reasoning, turn to the list of terms which have been given to these various fallacies (pages 253 and 263); commit these terms to memory, and in connection with each, remember not the words but the ideas of the most striking illustration presented. The tests of faulty reasoning may be used as a sort of formula. Against this formula, fixed in your mind by the concrete illustrations, hold up any statement which you may question. See if you can place it accurately alongside of one of these undoubted errors. If you can, you ought certainly to hesitate to accept the argument in which it is found; you ought even more to hesitate to use the argument if it is your own.

Constant endeavor to be on his guard against the faulty reasoning of men who ask him to accept their word, and constant endeavor to prevent his own thinking and talking from going astray, are marks of an efficient man.

CLASS ACTIVITIES

Exercises

1. What errors of reasoning can you find in these?

   (*a*) A man charged with wrecking a bank defended himself in a long speech by telling the story of his youth, vividly explaining how he had risen from newsboy to bank president.

   (*b*) A speaker appealed to the past glories of our country as a means of distracting attention from present shortcomings.

   (*c*) "Vote for the candidate on the ..... ticket in the city election and be assured of party success in the coming national election."

2. What fallacy is Webster charging against his opponents?

The prisoner's counsel catch at supposed flaws of evidence, or bad character of witnesses, without meeting the case. Do they mean to deny conspiracy? Why do they rail against Palmer, while they do not disprove, and hardly dispute the truth of any fact sworn to by him? Do they mean to deny the conspiracy? If a conspiracy is proved, it bears closely upon every subsequent subject of inquiry. Why do they not come to the fact? The counsel neither take the ground nor abandon it. They neither fly nor light. They hover.

3. On page 264 the differing reports of a senatorial address are cited as an example of unsupported assertion. What other error in thinking is illustrated?

4. Point out two ways of accepting authority—one bad practice, the other good.

5. How may an appeal to prejudice defeat its own purpose?

6. How might the fallacy of "objections" be used in regard to disarmament programs? Federal ownership of railroads?

7. What do you think of this advice, "If you cannot talk about something, talk about somebody"?

8. What is the relationship between the errors of "raising objections" and "shifting ground"?

9. Why might it be effective, if not ethical, to cover up weakness in a case "by abusing the other attorney" before a jury, and very ineffective to try the same method before a supreme court?

SECTION V

THE NEGLECT TO THINK[1]

JAMES BRYCE

Suggestions for Reading

1. Mr. Bryce uses a startling expression, "the vice commonly called 'the reading habit.'" Find the setting in Mr. Bryce's thinking in which this statement is made. Consider his argument in the light of the title of this selection.

2. During your reading, determine what great public duty seems to be inevitably placed upon intelligent citizens by Mr. Bryce's conclusion in this article.

3. Pause in your reading to think of examples of public issues upon which it is difficult to find unpartisan statements in the public press. Think of other issues upon which the average voter can do little more than make a rough guess.

The deficient sense of civic duty, though most frequently noted in the form of a neglect to vote, is really more general and serious in the neglect to think. Were it possible to have statistics to show what percentage of those who vote reflect upon the ballot they have to cast, there would in no country be found a large percentage. Yet what is the worth of a vote except as the expression of a considered opinion? The act of marking a ballot is nothing unless the mark carries with it a judgment, the preference of a good candidate to a bad one, the approval of one policy offered the people, the rejection of another. The citizen owes it to the community to inform himself about the questions

[1]Reprinted by permission from James Bryce's *Citizenship*. Copyright, The Yale University Press.

submitted for his decision, and weigh the arguments on each side; or if the issue be one rather of persons than of policies, to learn all he can regarding the merits of the candidates offered to his choice.

How many voters really trouble themselves to do this? One in five? One in ten? One in twenty?

It may be asked, How can they do it? What means have they of studying public questions and reaching just conclusions? If the means are wanting, can we blame them if they do not think? If they feel they do not understand, can we blame them if they do not vote? In every free country the suffrage is now so wide that the great majority of the voters have to labor for their daily bread. In most European countries many are imperfectly educated. In the rural districts they read with difficulty, see either no newspaper or one which helps them but little, lead isolated lives in which there are scanty opportunities for learning what passes, so that the best they can do seems to be to ask advice from the priest, or the village schoolmaster, or take advice from their landlord or their employer. In parts of the United States and also in Canada, the native population has indeed received a fair instruction, and reads newspapers; but the mass of voters is swelled by a crowd of recent immigrants, most of whom cannot read English and know nothing of your institutions.

Broadly speaking, in modern countries ruled by universal suffrage the average citizen has not the means of adequately discharging the function which the constitution throws upon him of following, examining, and judging those problems of statesmanship which the ever-growing range of government administration and the ever-increasing complexity of our civilization set before him as a voter to whom issues of policy are submitted.

As things stand, he votes, when he votes, not from knowledge, but as his party or his favorite newspaper bids him, or according to his preference for some particular leader. Unless it be held that every man has a natural and inviolable right to a share in the government of the country in which he resides, the ground

for giving that share would seem to be the competence of the recipient and the belief that his sharing will promote the general welfare. So one may almost say that the theory of universal suffrage assumes that the average citizen is an active, instructed, intelligent ruler of his country. The facts contradict this assumption.

Does this mean that widely extended suffrage is a failure, and that the average man is not a competent citizen in a democracy?

This question brings us to reflect on another branch of civic duty not yet mentioned. Besides the civic duties already described of intelligent voting and thinking, there is another duty. It is the duty of mutual help, the duty incumbent on those who possess, through their knowledge and intelligence, the capacity of instruction and persuasion to advise and to guide their less competent fellow-citizens. No sensible man ought ever to have supposed that under such conditions as large modern communities present, the bulk of the citizens could vote wisely from their own private knowledge and intelligence. Even in small cities, such as Boston in the days of James Otis, the average man needed the help of his more educated and wiser neighbors. While communities remained small, this help was easy to get. But now the swift and vast growth of states and cities has changed everything. Private talk counts for less when the richer citizens dwell apart from the poorer; their opportunities of meeting are fewer, and there is less friendliness, if also less dependence, in the relation of the employed to the employer. Public meetings do not give nearly all that the average man needs, not to add that being assembled to present one set of facts and arguments and deliberately to ignore the other, they do not put him in a fair position to judge. Besides, the men who most need instruction are usually those who least often come to meetings to receive it.

To fill this void the newspapers have arisen—organs purporting to supply the materials required for the formation of political opinion. Whatever the services of the newspaper in other respects, it has the inevitable defect of superseding, with most of

those who read it, the exercise of independent thought. The newspaper—I speak generally, for there are some brilliant exceptions—is, in Europe even more than here, almost always partisan in its views, often partisan in its selection of facts or at least in its way of stating them. Presenting one side of a case, addressing those who are already adherents of that side, putting a color on the events it reports—it serves up to the reader ideas, perhaps only mere phrases or catchwords, which confirm him in his prepossessions, and by its daily iteration makes him take them for truths. Seldom has he the leisure, still more seldom the impulse or the patience, to scrutinize these ideas for himself and form his own judgment. He is glad to be relieved of the necessity for thinking, because thinking is hard work. Indolence again! The habit of mind that is formed by hasty reading, and especially by the reading of newspapers and magazines in which the matter, excellent as parts of it often are, is so multifarious that one topic diverts attention from the others, tends to a general dissipation and distraction of thought. It is a habit which tells upon us all and makes continuous reflection and a critical or logical treatment of the subjects deserving reflection more irksome to us in the full sunlight of today than it was to those whom we call our benighted ancestors.

This is only one form of that supplanting of the practice of thinking by the vice commonly called "the reading habit" which is profoundly affecting the intellectual life of our time. Yet as steady thinking was never really common even among the educated, the difference from earlier days is not so correctly described by saying that people think less than formerly, as by noting that while people read more, and while far more people read, the ratio of thinking to reading does not increase either in the individual or in the mass, and may possibly be decreasing. Intelligence and independence of thought have not grown in proportion to the diffusion of knowledge. The number of persons who both read and vote is in England and France more than

twenty times as great as it was seventy years ago. The percentage of those who reflect before they vote has not kept pace either with popular education or with the extension of the suffrage.

The persons who constitute that percentage are, and must for the reasons already given continue for some time to be, only a fraction, in some countries a small fraction, of the voting population. But the fraction might be made much larger than it is. The citizens who stand above their fellows in knowledge and mental power ought to set an example, not only by themselves thinking more and thinking harder about public affairs than most of them do, but also by exerting themselves to stimulate and aid their less instructed or more listless neighbors. The voter, it is said, should be independent. Yes. But independence does not mean isolation. He must not commit his personal responsibility to the keeping of another. Yes. But personal responsibility does not mean the vain conceit of knowledge and judgment where knowledge is wanting and judgment is untrained.

Just as his religion throws upon every Christian the duty of loving his neighbor and giving practical expression to his love by helping his neighbor, succoring him in the hour of need, trying to rescue him from sin, seeking to guide his steps into the way of peace, so civic duty requires each of us to raise the level of citizenship not merely by ourselves voting and bearing a share in political agitation, but by trying to diffuse among our fellow-citizens whose opportunities have been less favorable, the knowledge and the fairness of mind and the habit of grappling with political questions which a democratic government must demand even from the average man.

Democracy, they say, is based on equality. But in no form of government is leadership so essential. A multitude without intelligent, responsible leaders whom it respects and follows is a crowd ready to become the prey of any self-seeking knave. Nor is it true that because men value equality they reject

eminence. They are always glad to be led if someone, avoiding pretension and condescension, speaking to them with respect, but also with that authority which knowledge and capacity imply, will point out the path and give them the lead for which they are looking.

CLASS ACTIVITIES

Questions for Discussion

1. Do you think that Mr. Bryce really answers the vital question he asks on page 273: "Does this mean that widely extended suffrage is a failure, and that the average man is not a competent citizen in a democracy?" Explain.

2. What is the effect upon a reader of the constant, unvarying appearance in a daily paper of a phrase, "Our country, right or wrong," even though he pay little attention to it? Consider the extension of your answer into the field of advertising, into the field of campaign slogans. Bryce says "daily iterating makes him [a reader] take them for truths."

3. Could the charge made by Bryce, that the daily press is superseding the practice of individual thinking, be extended to the effect of the movies? Explain.

4. What tragedy is represented by a man who recognizes the danger of newspaper "stuff" but who bases his opinions entirely on it?

5. In the light of Mr. Bryce's last paragraph, describe the personality of a leader.

6. Why are the accounts of political affairs rarely the same in leading newspapers?

7. What would Mr. Bryce say about the citizen who does not vote?

8. Into which of the "Pitfalls in Thinking," pages 251-269, are ignorant voters most likely to fall?

9. Is there justification for Bryce's charge: "the vice commonly called the reading habit"?

10. How are voters in your community educated on public questions?

SECTION VI

NEWSPAPERS AND THE TRUTH[1]

FREDERICK L. ALLEN

Reading Suggestions

Mr. Frederick L. Allen discusses several sources of error in articles by the public press. Notice that the discussion centers around six key ideas: I, The Importance of Newspaper Ethics; II, Bias as the Enemy of Truth; III, Careless Selection of News; IV, Indifference to the Truth; V, Making a Small Story Big or Breezy; and VI, The Advance in Newspaper Ethics.

I

It is a significant fact that public interest in newspaper ethics and the conduct of the press was never so widespread in this country as it is today. The war, with the improvement which it brought about in methods of swaying masses of men by controlling or doctoring the news, has made us realize that the problem of newspaper conduct is more fundamental than we had supposed it to be. We now see that it is immensely important that the press shall give us the facts straight; and not merely the facts relating to department stores and other large business concerns, but the entire mass of facts about the world in which we live—political, economic, religious, scientific, social, and industrial.

It is beginning to be understood that access to accurate accounts of what is going on about us is one of the indispensable

[1] Printed in the *Atlantic Monthly* for January, 1922, and here republished with the consent of Mr. Frederick L. Allen and the Atlantic Monthly Company.

conditions of freedom. We talk a great deal about the right of the individual to express his opinions, and somewhat less about the advantage to the community, or the nation, or the world, of determining its collective action after the freest discussion; but we are just beginning to see that it is still more vital that the individual shall be able to form his opinion upon the facts. If the facts are withheld from him or misrepresented to him, his opinion is as valueless as that of a judge who has heard incomplete or false evidence in a case. Though the individual may be at liberty to shout his ideas from the housetops, he is still a slave to illusion; and all the more completely a slave than if he were in bonds, because he fancies that he walks freely in the light.

There never was such an age of newspaper-reading as the present. Most of us read—or at least glance at—one, two, or more newspapers a day. They are the eyes through which largely we see the life of our time, and the news that they print is in great measure the raw material of our ideas. Nothing is more important than that through these eyes we shall see, not a distorted picture, but the reality. It is often contended in England, where the Northcliffe press wields far more power than any existing group of American newspapers, and it is occasionally contended in this country by those who take a gloomy view of affairs, that the public is at the mercy of the lords of the press, who feed it such garbled news as will best serve their own selfish purposes. Other critics assure us that the ethics of the newspaper profession are higher today than those of any other. It would seem worth while to consider the whole matter afresh, and decide for ourselves what the public interest requires of the press in the interest of truth, and how far these requirements are being met.

The public interest requires that all unsigned news on the news pages—all news, in other words, which does not bear its own tag, to warn the reader that he is seeing the facts through the spectacles of somebody's personal opinion—shall be presented

as accurately and impartially as is humanly possible. On the editorial page every newspaper proprietor or editor has a right to state his views as forcibly as he wishes. Papers also have an unquestionable right to commission correspondents to include in their dispatches their personal view of events, provided these dispatches are signed. The imperative need is that what the press presents as fact shall be fact, given correctly and without bias.

II

Bias is all the more completely the enemy of truth on account of the slovenly way in which most of us are accustomed to read the papers. For every report we weigh thoroughly for ourselves, checking the generalizations and summaries in headline and leading paragraph by the details which follow, there are ten that we only glance at. Usually we carry away nothing but the dim impression that Mr. X has done something disastrous, or that Governor Y has made another fine speech; we retain the bias, and little else. If you doubt that you yourself skim the paper in this way, try handing the paper to somebody else after you have finished, and making him examine you on the contents of an important article. You will probably soon realize how vaguely most of your news-reading is done, and understand how easily the twist of a phrase in headline or leading paragraph, by giving a biased impression, may cause thousands of readers to form opinions based, not on the facts, but on somebody else's view of the facts.

This cardinal rule of newspaper ethics—that what is presented as sheer fact should be accurate and without bias—is easy to state. It is harder to live up to than anybody can imagine who has not faced the newspaper man's problem for himself.

In the first place, it is hard for a reporter, just as for any other person, to give an absolutely accurate account of any event, even when he has seen it with his own eyes. The fallibility of even first-hand evidence from eyewitnesses is well known; no

one can read a book like the late Professor Münsterberg's *On the Witness Stand* without appreciating the difficulties of the reporter. Furthermore, it is also exceedingly hard to write an account of any event without coloring it with one's own opinions. Though the reporter has every intention of stating only the clear facts, he may give them bias simply through his choice of language.

Suppose one senator denounces another in a speech. Shall the reporter write, "Senator A—— sternly rebuked Senator B——" or shall he use the words "vigorously attacked," or "sharply attacked," or "fiercely attacked"? If he decides upon "sternly rebuked," he seems to favor Senator A——, who uttered the rebuke; if he says "fiercely attacked," he gives no such favorable impression, and the reader tends instinctively to side with the senator who was attacked. Shall he, in describing an automobile accident, say, "The truck was going at a terrific rate," or content himself with, "The truck was said to have been going thirty miles an hour," and leave the reader to decide whether this was a "terrific" rate for a truck to be going at in that place at that time?

Or suppose he must give an account of something really difficult to record objectively—the applause, let us say, which greeted the closing sentence of President's Harding's inaugural address. Was it enthusiastic or perfunctory; was it general, or half-hearted and scattered? The truth here is a matter of judgment. One man thinks the applause large, because he knows beforehand how hard it is to hear a public speech out of doors without distractions, and therefore expects something less impressive than actually occurs. Another man, who comes to the inaugural expecting an ovation, is disappointed. Then again, the reporter's political sympathies, his personal opinion of Mr. Harding, and his own enthusiasm or lack of enthusiasm for the address are almost sure to influence his judgment of the facts.

If he were the crack reporter of an opposition paper, he might,

with every intention of giving the exact truth, write something like this, which appeared in the New York *Times* on the morning of March 5, 1921:

> Mr. Harding has a good voice, and the amplifier in the roof of the kiosk carried his voice as far as the House and Senate office-buildings. Considering that the average inaugural address is audible only to those who stand within fifteen feet of the President, this was an enormous improvement, and enabled the crowd to manifest its feelings, when it had any, with something like spontaneity.
>
> The address was only thirty-seven minutes long, and Mr. Harding delivered its final pledge with a devout solemnity which did not fail to have its effect on the crowd.
>
> There was a roar of applause as he concluded and turned to receive the congratulations of those nearby, Vice President Coolidge being the first to shake hands with him.

Another reporter of Democratic sympathies might regard the applause as Mr. Louis Seibold did in his dispatch to the New York *World.* After noting earlier in his account that "Five times his [President Harding's] reading was interrupted by applause, but at no time was there a demonstration in which all of the people gathered in front of him united," he quoted the President's peroration and then wrote:

> The applause that approved this sentiment was rather more general than had followed any other statement made by the new President. Before it had died away, and while the Marine Band was rendering the national anthem, the crowd began to melt away. Mr. Harding acknowledged the congratulations that were showered upon him by the members of his Cabinet and the leaders of the two Houses.

If, on the other hand, the reporter were favorably inclined toward Mr. Harding and impressed with the speech, he might see its reception as did the correspondent of the New York *Herald,* who quoted President Harding's final sentence and then continued:

There was a palpable moment of absolute silence. The President remained as if transfixed. The small group standing with him in the white-covered stand seemed stayed from speech or action by the deep and moving solemnity of the voluntary promise. Then a wave of applause started up from the fringe of the crowd nearest the portico, rolled backward and to the right and left, carried through the massed thousands, and became a solid roar. The President waved a hand in happy acknowledgment and turned to meet the eager compliments of his friends.

Readers of the *Herald* on that March 5 must have thought the address an immense success; readers of the *Times* and *World* undoubtedly gained quite a different opinion; and yet each correspondent may have described the event conscientiously as it appeared to him. In such cases it is almost impossible not to let personal feeling color one's report.

III

News may also be colored in the process of selection as well as in that of presentation. Let me take an example such as frequently occurs in my own experience. It is my duty to give to the press the news of a great university. I do not happen to be a newspaper reporter, but my problem is essentially the same as the reporter's. When the university's enrollment figures for the year are made up, the Freshman Class shows a gain in numbers. If, in my announcement to the press, I compare the 1921 figures with those of 1920, or with those of any other year since the war, the gain looks very large. On the other hand, if I compare them with those of 1911, when the Freshman Class happened to be unusually big, the gain looks less impressive. If I mention the fact that part of the gain is caused by a difference in the method of classifying undergraduates, which automatically adds to the Freshman Class a number of men who were formerly listed elsewhere, it looks still less significant. There are thus three or four ways of making the statement. Even though I am

honestly anxious to give an accurate impression, it is hard to decide just what facts to select for presentation. And there is, of course, always a temptation to make the gain look more imposing than it actually is.

Or let us suppose that a reporter is sent to cover a dinner. Shall he devote his leading paragraph to the size and enthusiasm of the gathering, or to the consternation caused by the single untoward event of the evening—a violent and inappropriate statement made by one of the speakers? This again is a question of selection. Sometimes it is a toss-up in the reporter's mind between the two treatments of the event; and yet the opinion which thousands of readers form of the organization which held the dinner may depend on this apparently unimportant decision.

An added element of difficulty is caused by the speed with which newspapers have to work, and the circumstance that much of the color of a story is necessarily given it in the newspaper office by men who lack a first-hand acquaintance with the facts. There is no opportunity to wait a few hours for a chance to check facts; they are usually worthless unless given to the public instantly. City reporters telephone much of their news to the office, where their statements are taken down hurriedly in a telephone booth, and then thrown into shape by a member of the office staff. Always the headlines are written by the office staff; they have to be, because the reporter cannot tell what size and style of headline is needed, and because the writing of headlines requires a special training. The man who concocts them must read each news-story rapidly and write his "head" promptly. He cannot waste time upon niceties of emphasis; the all-important thing for him is that the head shall have exactly the right number of letters to fill its space, and that it shall be original and dramatic enough to catch the reader's attention. Like the reporter, he finds that bias insists on creeping into his presentation of the gist of the news.

IV

Most newspaper inaccuracy is not, however, the result so much of the inherent difficulty of properly collecting and presenting the facts, as of the ignorance, carelessness, and thoughtless indifference to truth of a considerable proportion of newspaper men.

By the very nature of newspaper organization, the men sent out on assignments usually know too little about the matter in hand. One day a man is instructed to get a story on the immigration problem; the next day, he has to write a breezy interview on a bootlegging case; the next day, he may have to report the visit of Dr. Einstein to a university. He has not the time, even if he had the inclination, to make a preliminary study of the immigration problem, the liquor laws, and the theory of relativity. Newspapers try to develop special abilities in their reporters and, so far as possible, to keep men assigned to the subjects which they know about; but the field of news is so immense that much of it has to be covered by inexpert men. Besides, many reporters have only a limited education; they know so little that they have no idea how their ignorance handicaps them. And they generally tend to be careless. Their immediate object is usually to get the most newsy and sensational story they can. If they are being paid at space-rates, a breezy story which pleases the jaded eye of the city editor will be printed and will put money in their pockets. If they are salaried reporters, such a story will at least give them prestige with the critics at the city desk. No reporter wants to get the reputation of returning empty-handed, or with a dull story. The temptation is to make a bluff at knowing the subject, and slap the story together anyhow.

Here, for instance, are the headlines and the first two paragraphs of an item which appeared lately in a Boston paper:

DISCOVERS NEW NEBULAR MASS

PROF. SLIPHE OF HARVARD FINDS IT GOING AT RECORD SPEED

Prof. V. M. Sliphe of Harvard, stationed at the Flagstaff, Ariz., Observatory, peered through his telescope a few nights ago, according to a dispatch received at the Cambridge Observatory, and much to his surprise saw a faint, cloud-like, self-luminous mass of attenuated matter situated far outside the solar system, traveling at the rate of 2000 kilometers per second. This rate of speed is twice as great as the fastest nebula yet discovered and 100 times greater than the average speed of the lowly star. In fact, it is the greatest velocity known to astronomy.

The telescope at Flagstaff is situated on San Francisco peak at an altitude of 13,000 feet. Harvard astronomers are manifesting much interest in the matter because of its supposed great distance from the stars ordinarily seen in the heavens and because of the tremendous speed at which it is traveling.

Now, the facts of the case were that the discoverer's name was not Sliphe, but Slipher; that he was not connected with Harvard, but with the Lowell Observatory; that he did not discover the nebula, which had been known for a long time, but only ascertained its speed; that the telescope at Flagstaff is not at an altitude of thirteen thousand feet, but of about seven thousand; and that it is not situated on San Francisco Peak, but merely in the neighborhood. It would be difficult for ignorance and carelessness to bring about more errors in the space of two paragraphs. What happened was that the Lowell Observatory reported its discovery to the Harvard Observatory, which made a brief announcement to the press; and the news-writer took this announcement, and tried, as he would have put it, to "make a good story out of it."

"Make a good story." That is the cause of infinite newspaper inaccuracy.

V

The same desire often leads reporters at a public meeting to lay disproportionate emphasis on a sensational remark made by a speaker. The remark may have little real significance, and the reporters may misquote it because they happen to be half asleep when it is made, or are not even in the room and get it second-hand afterward from some neighbor of uncertain memory; but, if the remark seems striking enough to make a big story, that fact may outweigh in their minds every other consideration.

Akin to the temptation to make a small story look big is the temptation to make an otherwise dignified story look breezy. A Boston newspaper recently printed an interview with a Harvard physician on the importance of using the feet properly in standing and walking, as shown in the physical examinations of Harvard freshmen. It was an interesting interview, carefully prepared by an intelligent and well-equipped reporter. But the editor to whom the interview was submitted decided that it was too heavy; it needed to be brightened up: So he headed it—

WHY BE SAD?

FEET ARE THE SOURCE OF ALL JOY

HARVARD EXPERT TELLS HOW TO DRIVE CLOUDS AWAY IN SIX SHORT WEEKS

And the illustration—a photograph of the physician—the editor surrounded with a border of "Joys" and "Glooms," after the fashion of the comic cartoons. In thus misrepresenting the nature of the interview, he succeeded in making ridiculous the man who had taken the trouble to give it; but to this particular editor nothing mattered except that he made it look like the sort of low-comedy stuff to which his mind was attuned.

VI

The newspaper profession is steadily advancing, not only in the effectiveness of its news-gathering machinery, but also in its standing in the community and in its ethical standards. Early in the last century there was so little recognition of the rights of the press that Henry Clay, making a political speech in Kentucky, ordered off the field a reporter who had the impertinence to report him without first getting special permission. It was not until some time after the beginning of the Civil War that the Government at Washington made satisfactory arrangements for issuing its news to all newspaper men simultaneously, instead of giving it haphazard to the first comer. Now the President and the members of his Cabinet confer with the press representatives once or twice a day; and, as a matter of course, reporters are given front seats at almost every kind of public occasion.

Two generations ago the leading New York editors called each other blackguards and scoundrels in their editorial columns—a practice which today would be considered disreputable. Some twenty years ago Mr. Henry Watterson declared that journalism was "without any code of ethics or system of self-restraint and self-respect." The standard of newspaper conduct and of impartiality has risen conspicuously since then. The papers of one political party cannot dismiss the deeds of their opponents with such brief notice as they could once. In the presidential campaign of 1920, a Republican paper in Boston gave more space than any of the Democratic papers to an appeal for Mr. Cox issued by a group of men in New York, while a Democratic paper in the same city ran a straw ballot and printed the results day by day on its front page, although they favored Mr. Harding. It must in fairness be acknowledged that most papers give front-page space to Mr. Gompers quite as readily as to Judge Gary. Editors now observe with the utmost care release dates on material furnished them in advance, and most newspaper men can be trusted with confidential information or with facts not yet ripe for publication.

Meanwhile, it would be well if all of us who read the newspapers—and that means pretty nearly everybody—knew enough about newspaper organization and methods to be better judges of the credibility of the news. I should like to see lectures on "How to Read the Newspapers" given in colleges and schools and elsewhere. It is as essential for the citizen of this day to be able to read the morning paper with a discriminating eye—to be able to distinguish the Associated Press dispatch from the special correspondent's forecast of conditions, and the fact story from the rumor story, and to be able to take into account the probable bias of the paper and make allowance for it—as it is for a lawyer to learn to assess the value of evidence. Only as we are able to estimate the relative amount of credence to be given to conflicting reports, and to judge for ourselves the reliability of the sources of the news, do we come somewhere near seeing that true picture of the world about us which we must see if we are to play our part in it intelligently and independently.

CLASS ACTIVITIES

Reading Projects

1. Possibly you can find Walter Lippmann's *Liberty and the News* in the public library. If not, you can find a chapter from it in the *Atlantic Monthly,* Vol. 124; and another in the *Century Magazine,* Vol. 103. A study of one or both of these articles would reveal several important comparisons to be made with Mr. Allen's article. Do not undertake this project without a realization that it will require *keen* thinking. Possibly some member of the class may undertake the task as volunteer work.

2. James Melvin Lee, *History of American Journalism,* speaks very highly of the ethics of the newspaper profession in America today. Read it to see if it causes you to accept Mr. Allen's argument with some reservations.

3. Read Schaeffer, *Thinking and Learning to Think,* Chapter IX, "The Right Use of Books," for additional cautions to present to the class.

4. An article in *The Outlook,* Vol. 135, page 651, entitled "How History Is Made" reports a careful investigation of facts in order to defend Theodore Roosevelt's memory against an unjust charge. Report on this to the class.

Problems and Projects

1. Class discussion. In the light of the principles of reading so far considered in this book, work out a class outline entitled "The Proper Way to Read a Daily." Beside it, on the blackboard, work out an outline entitled "Common Errors in Reading the Daily Press."

2. Send a delegate to some young lawyer of your town, preferably one who has himself come up through your own city schools; request him to address your class on one of the subjects named below, or on a subject suggested by them: Cross-examining to Find the Truth; Handling an Intentionally Dishonest Witness; How the Courts Look upon Circumstantial Evidence; Common Weaknesses of Witnesses.

Topics for Oral or Written Work

1. The spectacles I see through.
2. When selection of material was a problem.
3. When the longest way around was the shortest way around.
4. New headlines for the articles in a newspaper.
5. A jack-of-all-trades and master of none.
6. "Cannot make something out of nothing." Does this apply to newspapers?
7. Making a good story from a school event.
8. Types of "breeziness" in current newspapers.
9. Discussion: Interesting vs. important news; give examples.
10. How a reading public can improve the newspapers.
11. The whole truth; nothing but the truth.
12. Items in the "beg pardon" column of a newspaper.
13. A misrepresentation of facts.
14. Report a school "story" accurately.

Exercises and Problems

1. In the March, 1921, issue of *The American Magazine,* Dr. Frank Crane has an article, "Are You a Keen Observer?" It begins, "When I was a boy, I was once out hunting in the woods along the Kankakee River, near Springfield, Missouri. I was accompanied . . ." If you are a keen observer, you will recall at once that the Kankakee is not near Springfield, nor is it in Missouri. A large number of similar errors of fact and of spelling and grammar are intentionally scattered through the article. If possible, secure a copy, have it typed, without the corrections which begin on page 120 of the same magazine. Pass it to several of the class and see who detects the largest number of errors.

2. If more people were independent thinkers there would not be a yearly output of millions of barrels of patent medicines, the main ingredients of which are alcoholic preservatives. Soothing syrups with opiates are fed to children because they are said to cry for them. The children are quieted, oftentimes so effectually as to be stupid through life. "Harmless vegetable remedies" is a magical phrase.—*Bolton,* page 85.

Find advertisements of this nature in current literature. Display them and point out their errors of reasoning.

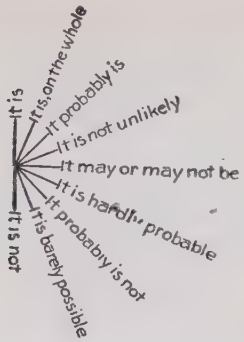
3. Read again Bolton's account of superstitions, page 85. The number 13 is so ominous that you cannot get a room number 13 at a hotel, and you can scarcely have thirteen at a table. Friday is considered so unlucky that some steamship companies hesitate to make sailing dates on that day of the week.

Report to the class similar superstitions found in your community.

4. S. S. Seward gives a suggestive diagram in the form of "a compass-card" in making the point that an accurate summary of an article read or a statement heard requires a very careful discrimination in the selection of essential words. He says:

Just as it makes a great difference at the end of a day's sailing whether a mariner has laid out his course northeast or northeast-by-east, so it is with us when we aim at an idea; we can afford no inaccuracy in the direction indicated by our words. It is, for example, not enough to be able to say merely that a thing is or is not so; we need to pick out the more precise direction from some such compass-card as this.[1]

[1]From S. S. Seward's *Note-Taking,* page 49. Copyright, Allyn & Bacon.



Work out a series between "hoping" and "fearing," between "love" and "hate," "admiration" and "contempt," "right" and "wrong," or some other words of contrasted meanings. Indicate sentences in which you would properly use each word in your series.

5. "Habits of thought start in our environment."

(*A*) Trace the growth of your attitude on topics like: (*a*) Sunday amusements, (*b*) higher education, (*c*) domestic service, (*d*) a Ford vs. a Packard car, (*e*) *The Saturday Evening Post* or *The Outlook*, (*f*) the prohibition amendment, (*g*) compulsory athletics, (*h*) professional athletics.

(*B*) Consider these issues: (*a*) What part is played by your environment in framing your present attitude? (*b*) Has your thinking on any current topics been based on a biased viewpoint which may have determined your attitude?

6. We should learn nothing without the tendency to implicit acceptance; but there must clearly be a limit to such mental submission, else we should come to a standstill.—*George Eliot.*

In the light of this statement, what distinction needs to be made between "reading for information" merely, and reading "to draw conclusions"?

7. A statement is attributed to Dr. J. P. Gordy, "Words are like paper money; their value depends on what they stand for." Get tables of the value of the money of various nations of Europe today; look up references to the money systems of Europe, tracing the chief causes of the enormous decline in the German mark. Then copy from the daily press a few citations which will show that the values of words depend

upon what they stand for. Discuss the worth of the comparison of Gordy.

8. Lincoln was a past master in the use of homely analogies to make his meaning clear—analogies like the "letting fall of a ball of string which one is carefully winding up," as used by James on page 97. Secure a book[1] which includes a number of Lincoln's addresses, preferably his early speeches; divide the task among a number of the class, each taking one address. Collect and classify the homely analogies used in the book. Try to secure them all. You may be certain that any clergyman, editor, or lawyer in your city would be gratified to have your class present him a copy of your study, neatly prepared, with your compliments.

9. A certain teacher, desiring to show her class how difficult it is to report accurately what they themselves actually see, tried this experiment. She and one of her students planned to act out a "case of discipline." The student was to bring to class a newspaper, display it conspicuously, and read it during the class period. Together the conspirators worked out a dialogue of rebuke on the part of the teacher and impertinence on the part of the pupil. They rehearsed the scene several times till the dialogue was letter perfect. The class in the meantime was totally unaware of the impending experiment. One day the conspirators played their scene in the class to a very real audience. The teacher said, after sending the student from the room, "Now this is a serious matter of which you are all witnesses. I want you to write down exactly what happened, and what was said."

The written reports were amazingly different.

Plan an experiment that will serve the same purpose, but of an entirely different nature. Carry it out in your classroom.

10. An editorial in *The World's Work*, Vol. 45, page 233, comments upon the haphazard way in which our public opinion is molded:

> Probably the everyday man and woman in the polling booth does not subject his convictions to any definite analysis. He is voting upon an impression, perhaps even a prejudice; he is not thinking primarily of politics. A reading of headlines for a year, an occasional more careful study of particular measures, overheard scraps of talk in clubs or offices, now and then a heated argument in a country store—in such ways is forged the great instrument of democracy known as public opinion.

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[1]Such a book is *Selections from the Writings of Abraham Lincoln*, published by Scott, Foresman and Company.

With which of the sections of the present chapter is this statement most in keeping? Read aloud the comparable passage.

11. Discuss the validity of the statement, "The Monroe Doctrine was a wise policy a century ago; therefore it should be the policy at the present time."

12. Examine "How History Is Made," in *The Outlook,* Vol. 135, page 651, to see an explanation of how one misleading statement might do great harm, and how the error in question was located and cleared up.

13. What is the worth of this argument?

In Massachusetts the average person goes to school seven years; in Tennessee the average person goes to school three years. In Massachusetts the average income is $200.00 per person; in Tennessee it is $116.00.

In the United States as a whole, the average college graduate earns $2000.00 a year, the average high school graduate $1000.00, the average elementary school graduate $500.00.

Each day spent in high school is worth $25.00 to each pupil, each day spent in college $55.55. This is more than the average boy or girl can earn by leaving school and going to work.

Does education pay?

IT DOES!

Additional Topics for Oral and Written Work

1. Recording "the ripples of a passing steamer" and "forgetting the tides and the currents and the ground-swell." See Walter Lippmann, *The Atlantic Monthly,* Vol. 124, page 783. Look up the reference and use the topic for a talk to the class.

2. The danger of a partisan report. Give examples.

3. What is supposed to be fact, and what is supposed to be comment, in any one news item you may choose from a current daily paper.

4. Discuss with examples one or more of the following elements of sound decisions in controverted questions: (*a*) close and accurate first-hand observation, (*b*) divorcing oneself from prejudices, (*c*) seeing two sides to a question, (*d*) rejecting rant and cant in what one reads and hears, (*e*) distinguishing between facts and inferences from facts, (*f*) reserving judgments till all available facts are in, (*g*) rejecting all hearsay evidence.

5. A case of suspended judgment that was justified.

6. Find an obviously partisan argument in a current newspaper. Point out the danger.

7. Find an evident endeavor to be fair to a reader who has a different opinion. Editorials in reputable papers are likely to furnish examples.

8. Comment upon a school event that was inaccurately reported in your school paper.

9. A report that made you suspicious.

10. How the public is inadequately informed on ..... (Name a local issue).

11. How the public in our city was educated on ..... (Name a local issue).

12. Why is gossip usually a fallacy?

13. Campaign slogans that attracted voters.

14. When you saw, "not with your eyes," but "with your prejudices."

15. A case of accurate observation.

16. A figure of speech used as an argument.

17. Drawing a conclusion from untypical cases.

18. Carried away by a speaker's eloquence; disregarding his arguments.

19. The importance of looking for "the other side" of a case.

20. Comparing an advantage with an objection in a doubtful case.

21. The argument of cost as contrasted with advantages in a local issue of your community.

22. "Closed minds are unhappy." Is this true? Why?

23. How can a personal element in the use of statistics make them tell an untruth? Explain.

24. Why you are a Republican or a.....; a Methodist or a.....

25. Is there any such thing as a "mere fact"? Is a fact a fact until it is interpreted?

ADDITIONAL READING PROJECTS

1. "Books for Young People," Annie C. Moore, *The Bookman,* Vol. 51, page 86. Interprets the likes and needs of young people. Good article for evaluative reading on the part of the class.
2. "As I Like It," William L. Phelps, *Scribner's Magazine,* Vol. 72, page 753. Evaluating "best sellers." If you have read *Babbitt, This Freedom,* or *One of Ours,* you will be interested in the comments of this keen critic upon these books.
3. "With the Aid of a Two-cent Stamp," Henry E. West, *The Bookman,* Vol. 50, page 531. Story of exaggerated advertising appealing to gullible people; exposes the practices of "learn to write quickly" schools.
4. "Getting Material," Ellis P. Butler, *The Bookman,* Vol. 49, page 581. Satire showing danger of erroneous information and false or distorted facts in interviews.
5. "Perturbation of the Misinformed," Frederick Palmer, *The Bookman,* Vol. 49, page 590. The president of a photo-play company exposes the gross misrepresentation by an uninformed writer. The danger of proofless assertions. Students interested in movies will enjoy this article.
6. "Textbook Poison in Canadian-American Friendship," W. S. Wallace, *The Bookman,* Vol. 48, page 680. Reports of 93 histories which show prejudice. Shows how occasions have arisen which might foster these misunderstandings.
7. *Samuel Lee, Criminologist,* Arthur Crabb. Detective stories which show how easily circumstantial evidence may be wrong.
8. "How History Is Made," *The Outlook,* Vol. 132, page 651. How a careful newspaper man "ran down" a misleading statement concerning a president of the United States which appeared in the public press.
9. "Liberty and the News," Walter Lippmann, *The Atlantic Monthly,* Vol. 124, page 779. Shows the intimate connection between accurate publication of the truth and real popular liberty.
10. "Barriers to Information," Walter Lippmann, *The Century Magazine,* Vol. 103, page 121. Various elements which make it difficult for the general public to get correct information. Also how inadequately people read the newspapers.
11. "The Press of Today," John Macy, *A Guide to Reading,* Chap. XI. A discussion of the unreliability of the press.
12. "Judging of the Worth of Statements," F. M. McMurry, *How to Study,* Chap. VI. Discusses the proper attitude toward "authorities," with the critical, evaluating attitude of mind.
13. "The Case of Lydia Bixby," Banning Kendall, *The Bookman,* Vol. 54, page 516. Careful statement of the exact facts concerning Lincoln's famous letter to Mrs. Bixby. Shows how an exact historical truth is established.

14. "A Sport Writer Confesses," Lawrence Perry, *The Bookman*, Vol. 53, page 328. Shows how difficult it is to hold to the truth in writing about sports, and the effect of newspaper publicity upon the ethics of sport.
15. "Out of My Newspaper Days," Theodore Dreiser, *The Bookman*. Vol. 54, page 208; also page 427. Getting a job as a newspaper man; his life and work on a paper.
16. "What Seven Million Americans Are Reading," Natalie De Bogory, *The Outlook*, Vol. 133, page 354. The foreign language press and its influence in America.

CHAPTER SEVEN

Reading for Enjoyment

Books are the windows through which the soul looks out.
—Henry Ward Beecher.

SECTION I

THREE LEVELS OF READING

"STUDY" READING: READING FOR BASAL INFORMATION

Many of the discussions in this book have dealt with "study" as contrasted with "reading" in the broader sense. Textbooks present to us in concentrated form materials which we have to master, to be able to reproduce upon demand, and to use directly in specific tasks of our own. On the basis of the information mastered from textbooks we proceed to various classroom experiments in the use of the facts, data, and information thus secured. Obviously the "study" reading of such primary books is intensive, painstaking, detailed consideration of their contents. Study has in view the mastering of certain definite and limited information; reading is the somewhat easier perusal of books for the sake of pleasure or general enlightenment.

"SUPPLEMENTARY" READING: READING FOR ADDITIONAL INFORMATION

Along with our perusal of textbooks, especially in history, social sciences, and English, we have frequent occasion in school life to perform a second type of reading which we call "supplementary." Here, too, as in "study" reading, our major purpose is to lay hold upon additional information within the subjects upon which our textbooks have given us a beginning.

We may distinguish between these two levels of reading in adult life by noting, for example, the case of a physician. Say that a new authoritative book appears in the field of his specialty. He studies that book in minutest detail. Or, planning for a puzzling case which he has to diagnose and treat, he reads carefully a few selected passages from the authoritative writings upon the subject. This is "study" reading in adult life. From month to month the same physician finds in his medical journals articles written by various men upon subjects more or less closely related to his own field of practice. Through such articles he looks with interest, to find what other men are thinking and with what they are experimenting. He "keeps up" as we say, with the thinking in his subject, alert to be informed, resolved to be intelligent along his line. This is "supplementary" reading in adult life. In contrast with "study" reading, which is deliberate and intensive application to books, "supplementary" reading is fluent and extensive application; it is survey reading with only an occasional intensive attention to especially significant parts.

"RECREATIONAL" OR "CULTURAL" READING: READING FOR ENJOYMENT

Both "study" and "supplementary" reading may be characterized as work habits looking for immediate and definite results in the realm of information or knowledge. They are the business or professional aspects of reading skill. There is a third level of reading whose purpose and whose essential skills are of a somewhat different order. Work is only a part of life; work may be called the bread and butter and the meat and vegetables of life; while pleasure, enjoyment, recreation are the desserts of life. The profitable employment of time in becoming acquainted with the rich possessions of our civilization is the other aspect of life contrasted with work. Here belongs a third level of reading, which for want of a better word, we may call "cultural" reading, or reading for enjoyment or enrichment.

As this chapter is to deal only with this third level of reading, we may consider certain aspects of it by way of preliminaries. First, "recreational" reading usually involves a kind of reading materials different from those of "study" or "supplementary" reading. In general, the two latter are said to cover the literature of knowledge, that is, books whose main content consists of a body of facts significant and important for the work and business activities of life. History, science, engineering, home-making, politics, statesmanship—all the major interests of man's active life in society, interpreted in myriad ways, and from innumerable angles—constitute the literature of knowledge.

In contrast, "cultural" reading has to do with the literature of power. In this distinction between literature of knowledge and literature of power, De Quincey, whose statement we have borrowed, has in mind a meaning for the word "power" much broader than the meaning used in ordinary discourse. He does not mean power either generated or generating for commercial purposes. He means the writings of men of deep insight and keen vision, not merely into the facts of life, but into the meaning of life; the writings of men and women who do not so much attempt to teach external facts as to interpret internal meanings. Looking upon the larger aspects of virtue, wickedness, aspirations, despair, brotherhood, service—the characteristics of personal and social relationships of the larger sort—such authors portray the permanent significance of the facts of life about which they write. It may be better to say that they deal with the spiritual rather than the material aspects of life and that their major purpose is the portrayal of these larger facts. Someone has said that a poet does not look at an object; instead, he looks into it.

In speaking of the materials which are to be used for cultural reading, we must not limit consideration merely to the content of such books. Another element must be added, namely, the form, the style, the literary artistry. Obviously, the duty of a

man who writes a textbook in history, or a magazine article on a problem of the day, is to give his readers a clear, well-organized explanation for their understanding. But one who is attempting to convey to others the charm of a violet, the sanctity of human sacrifice, the majesty of mountains, the terror of a storm, or the calm beauty of an April morning, needs to present the facts of his theme in form which is in keeping with the sentiment he desires to portray. We say that his writings have "style." He says what he means in a manner which is appropriate to and consistent with that meaning. His very words, sentence rhythm, harmony of sound, and the like are in keeping with the interpretation of life which he desires to represent. In this class of literature as such, of *belles lettres* the French call it, lies the realm of purely cultural reading.

A moment's thought will show that the three types of reading discussed above are by no means always clearly and sharply separated from each other. The three terms, "study" reading, "supplementary" reading, and "cultural" reading, emphasize the reader's differing *purposes* even more than they stress differing *reading materials*. In fact, the same piece of literature upon occasion may very well belong to any of the three classifications. An English class may *study* a poem like "The Landing of the Pilgrims"; an American history class may use it as *supplementary reading* embodying the spirit of the Pilgrim Fathers; or one may come upon it as *cultural reading* while looking through a volume of American poetry. In each case the purpose of the readers is the important element in deciding to which type of reading experience "The Landing of the Pilgrims" belongs. While such overlapping is inevitable, we are concerned here with those purposes of the reader which render his reading experiences distinctly cultural.

The selections of this chapter include the advice of several men upon the choice of books for leisure reading, and upon the reading habits to be sought for by the man or woman who desires

culture, who wishes to add to the refinement of his life by such means as literature affords. Your problem is to go through the selections and such supplementary reading as you can to find and to ponder upon advice on these questions:

(1) What books shall I choose to read?
(2) What are the standards for judging good books?
(3) What is good style in literature?
(4) When shall I read for enjoyment?
(5) How may I best read for enjoyment?
(6) Is true culture learned or absorbed?

CLASS ACTIVITIES

1. Discuss with illustrations from your own reading experiences the three types of reading.

2. Name one book or article, explaining how you have approached it at different times with varying purposes.

3. What current magazines can you name as presenting mainly materials for "cultural" reading; for "supplementary" reading?

SECTION II

A MAN AND HIS READING[1]

HARRY EMERSON FOSDICK

Something very significant has happened to a man when he realizes that in books the greatest souls of the world will come to call on him as though there were no one else on earth whom they had to call upon.

"What do you read, my lord?" said Polonius, and Hamlet answered, "Words, words, words." Many a modern victim of the invention of printing might say the same. With all the reading that is done, how few people know the experience which made Mrs. Browning say, "No man can be called friendless who has God and the companionship of good books."

Some books are our servants. They run errands for us. They are mental drudges. They bring us information; they tell us news; they keep us up to date; they equip us for our trade. But the great books are not our slaves; they are our masters; we sit at their feet to learn. "Look," they say, and looking, we catch new visions of life's significance. "Consider," they say, and considering, we are captured by a new truth, and our spiritual power is multiplied. A man's life is made by the hours when great ideas lay hold upon him and except by way of living persons there is no channel down which great ideas come oftener into human lives than by way of books. Said Charles Kingsley, "Save a living man, nothing is so wonderful as a book."

Many people shrink with a kind of modest reticence from claiming the greatest books as their own. They think that the great books are for scholars and specialists, not for plain people.

[1]Reprinted by the personal permission of Harry Emerson Fosdick.

Upon the contrary, the specialist has his library of learned messengers to run errands for him and for him alone, the engineer his books on engineering, the economist his books on economics, but the great books are for us all. They spring, not out of specialties, but out of the depths of the human heart. When Macbeth sins and his conscience faces remorse like a tide returning to a shore, we all know what that means; and whenever a great creative book strikes a deep note it is sure to be dealing with an elemental experience which is shared by us all. A significant day dawns in a man's life when he says to himself, "The supreme books of the world belong to me."

Most of the books we read are like the rain water that fell last night. It is a superficial matter and it soon runs off. But the literature of creative spiritual power is a whole sea—the accumulated spiritual gains of the ages—and to know it and love it, to go down beside it and dip into it, to feel its vast expanse, the currents that run through it and the tides that lift it, are among the choicest and most rewarding privileges that man can enjoy.

CLASS ACTIVITIES

1. Is Mr. Fosdick's distinction between books as "slaves" and books as "masters" well made? Discuss, with examples.

2. Do you think that universality of appeal is a fair test for the greatness of a book? Illustrate your answer by citing and discussing certain books.

3. Interpret "The supreme books of the world belong to me."

4. Which of the books used this year in your English classes has the largest "creative spiritual power"? Explain.

5. Write a substitute for the third sentence on this page, using instead of Macbeth one of Shakespeare's other characters.

6. Name the "great elemental experience" in each of five of Shakespeare's plays.

SECTION III

MY SILENT SERVANTS[1]

John Kendrick Bangs

Reading Suggestions

1. The essay in Section III, written by one of America's well-known literary men, is intended to leave with the reader a vivid impression of the many contacts with life that are possible through the reading of literature. You will find this point developed at the close of the essay.

2. Before the climax of Mr. Bangs's article and leading up to it by natural steps of increasing importance, are two other results of reading, each indicated by Roman numerals placed in the text. Yet each of the first divisions is so closely bound in meaning to the last that the essay has a fine unity.

3. It would be strange if the average member of your class should find that he himself has first-hand acquaintance with many of the books and the writers named by Mr. Bangs. Many of them, however, you will recognize by name. Read the essay through in a leisurely way, as essays should be read. Pencil in hand, place after each book and author named by Mr. Bangs one of the Arabic numerals 1, 2, 3.

   1. Books or authors of whose work you have had a taste.
   2. Books and authors whose names are familiar to you.
   3. Books and authors unknown to you, concerning whom Mr. Bangs arouses your curiosity.

4. During the course of a second reading, copy into three columns headed appropriately for 1, 2, 3, above, the names of all the books and authors named.

I am sorry for many kinds of folk. I am sorry for the distressed, the depressed, and the oppressed, whosoever they may be, or wheresoever found. I am sorry for the man of high aspiration thwarted at every point by the insurmountable steeps in the

[1]Reprinted by permission from *The Bookman*, Vol. 52, pages 306-310. George H. Doran Company.

path of achievement. But when I find a man who has the means to build up a library in his own home, yet into whose home come only the most inconsequential of books, I don't know whether I am sorry for him or not. If he be one of those self-made persons whose supreme satisfaction with results is their most salient characteristic, who sneer at the real booklover and refer even to the reader of a Sunday comic supplement as a bookworm, and who hold themselves superior to books and their makers, I do not pity him at all. He has earned his wage of ignorance, and is entitled to its increment of dross. But if on the other hand he is one of those upon whose mental horizon the Sun of Letters and the Stars of Song have not yet shone, and who grope in darkness not by preference but merely because they do not know that the light is there, then I am sorry for him. I would do all that lies in my power to lead him to the light, for what light there is, indeed, in a well-selected library! What joy of song is there! What glowing comradeships with the noblest minds of all time lie within the silent covers of our books!

I think I have today a keener realization of the complete satisfaction of a library than ever before, for for three years I have been an exile from mine, and after much wandering have only just now returned to it. Coming back to my books was like returning to a home filled with old and devoted friends. It is true that when I first entered into their presence they all had their backs turned to me, but their welcome was none the less warm for that. And when I realized that on their backs they bore their title to my regard, it seemed to me that their seemingly ungracious posture was merely their tactful method of "presenting their cards" lest, perchance, in the pressure of other matters I had forgotten their names. I wish all men would be as considerate. But there they stood, faithfully keeping watch, ready as ever to serve the need of each and every mood, giving me so warm a welcome, in truth, that with Shakespeare I was almost inclined to cry:

My library was dukedom large enough!

I

And who would wish a greater? Is not the kingdom of mind fairer than all the principalities of earth? I would not deny the value of acres. I am not at all sure that if I could be the Duke of Devonshire and myself at the same time I should decline the honor, but for the riches of the spirit I would seek rather the pages of Emerson than the greening reaches of Chatsworth, Eaton, or Blenheim. Warwickshire is beautiful, but lovely as are its meadows, its gardens, trees, and leafy lanes, it is lovelier still for the romance of Kenilworth and the poetry of the Avon. It is indeed through the inspiration of Shakespeare and of Scott that pilgrims are inducted into a greater appreciation of the delights thereof, just as the song of Wordsworth is the primary lure that summons us to the sunny charms of Windermere and Rydal Mount.

Bovée tells us—and, by the way, I wish somebody would tell me who Bovée was, and what he did besides writing sayings for books of quotations, for I find no reference to him in the cyclopedias or other works of the cyclopedic, and I doubt not that to greater ignoramuses than I he is as well known as Captain John Smith or Daisy Ashford— Bovée tells us that

> Books are embalméd minds,

which is why I wish to know who he is or was, and where he may be addressed. I should like to drop him a postal and after paying my respects to his genius, tell him that *real books* are nothing of the sort. On the contrary, they are the vehicles by which the still living minds of dead men are carried on through the immortal years. They may be enshrined minds, or minds perpetuated, but their suggestion is not of death, but of life itself. Bulwer-Lytton has phrased it more happily and more truly in his lines:

> The Wise
> (Minstrel or Sage) out of their books are clay,

But in their books, as from their graves they rise,
Angels—that side by side upon our way
Walk with, and warn us.

He might have added a tribute to the unwavering quality of their devotion to our interest, for our books, unlike some of our less constant friends, do not despair of our reformation if, perchance, heedless of their warnings, we sin and fall. They stand by faithfully, and though we fall seventy times seventy times, with persistent patience they again repeat their warnings, as if they knew that hopeless as we seem to be, there is yet hope for us.

Silent companions of the lonely hour

Mrs. Norton calls them, and in their companionship they enable us to forget our trials, and sometimes in our perplexity they do our thinking, and point to right conclusions, for us.

I love to lose myself in other men's minds.
When I am not walking I am reading;
I cannot sit and think. Books think for me,

says Lamb, who in his own sufferings found in books forgetfulness of pain, and who in his own books has brought forgetfulness of pain to others.

II

If I were a doctor I should make books a part of the *materia medica,* and prescribe them for my patients, according to their need. Over the door of the library at Thebes were inscribed the words "Medicine for the Soul," and Diodorus described books as "the medicine of the mind," wherefore I do not claim to have originated the idea, unless perchance in some earlier incarnation it was my privilege to be either Diodorus, or the sagacious trustee of the Theban library who suggested the inscription. I do not know if this were so or not. If it were, I can only say that it made no impression upon me. But I can personally testify

out of a rich experience to the medicinal value of books. Many a time have I wakened in the deadly darkness of the night, gasping for breath, with an acute indigestion, and, feeling myself on the verge of dissolution, lit my lamp. And in the breathlessness of some great book, such for instance as Victor Hugo's indictment of "Napoleon the Little," I have as by some homeopathic magic found almost immediate cure of my own. A course of Mark Twain and Bernard Shaw is good for any man's liver; and I cannot even estimate the number of occasions when, afflicted by insomnia, I have wrested sleep from the pages of books which I shall not name, all freighted with the anodyne of slumber. Literature contains the herbage of thought that cures. Whether used as anesthetic to soothe a distraught nerve, or as tonic to stir to action a sluggish circulation, books serve the purpose, and justify the assertion of the already quoted Bovée that "the worth of a book is a matter of expressed juices."

III

But best of all the uses of a library are the contacts with great souls that having books always at hand makes possible. It has been said that man is judged by the company he keeps, and in nothing is this more clearly demonstrated than in the bookish companions one chooses for his constant friends. The right kind of man loves good company, and the nobler his choice the closer to nobility of soul does he himself come; and a well-selected library places all these great spirits within easy reach. Fielding has said that "we are as liable to be corrupted by books as by companions," and that is true, but it is no more true than the more genial view that we are as likely to be elevated by books as by inspiring associations. I know of no surer index to a man's character than the things that he laughs at, or the things that he reads. If I find a man whose shelves groan under the weight of books which he has to keep under lock and key for fear of their contaminating influence upon his children, I have a fairly

clear line as to his type, and the quality of his soul. If on the other hand I find him enriching his mind with constant drafts upon the treasures of song, or feeding his soul upon the spiritual meat of the great masters of letters, or delving deep into the veins of the mines of philosophy, he seems to me to have become a promising initiate into the goodly company of the immortals. At any rate, association with the immortals is good, and it is through the open doorways of our libraries that they either come to us, or give us access to themselves.

At any time of the day or night I can follow the fortunes of Ulysses with no less a person than Homer himself for my guide. I can touch hands with all the gods of high Olympus on the cachet of his guidance, and all the splendors of the court of Zeus I am privileged to look upon, not through my purely mortal eyes alone, but with the vision of one who is himself immortal. If I desire to consort with men of power and purpose in ancient times, I have only to walk a foot or two from my desk to find in Plutarch a guide, who will introduce me to as many of the Caesars as I care to know, will present me at the court of Pericles, where I may have revealed to me the glory that was Greece; who will gossip to me engagingly of Solon and Themistocles, take me to dine with Lucullus, and give me the pleasing sense of having visited the Forum, and listened at the Agora.[1] Time and space set no limit upon my associations, and though I dwell in a hemisphere they never knew, and in an age to theirs remote, Plato and Socrates through my books speak to me and pour their wisdom into my ears, while cynical old Diogenes with surprising agility leaps over seas and centuries to make me laugh. If I have need for song, Horace responds to my call, day or night. Omar Khayyam leaves his vine, drops his jug, and deserts his "thou" for a moment to charm me with verses, while if I be depressed in spirit a mere tap at the door of their books will bring Epictetus, or the Emperor Marcus himself to minister to my need of cheer.

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[1]*Agora:* Greek market place; hence assembly.

If I be ill in bed, unable to stir abroad, books will take me to all the countries of earth, and in whatsoever company I may choose to go. I can visit the realms of the Grand Khan with Marco Polo, or week-end in Peru with Pizarro while that gallant bandit loots the treasury of the Incas. With Froude I can visit the West Indies without even lifting my head from my pillow or putting on my slippers. With Caesar I can travel from Rome to Britain, and find my way enlivened with many a stirring little scrap, and cross the Rubicon in the most invincible of company. With D'Artagnan, Porthos, Aramis, and the noble Athos, to whom my sleepless friend Dumas has introduced me, I can feed and sleep in fascinating roadside inns in France whenever the spirit moves. There is not a stone worth looking at in all of Venice that Ruskin will not pack into a small compass and for my delectation bring to my bedside, if I but open the cover of a book and let him out. Johnson and Boswell and I can go stamping through the Hebrides together if I am minded to summon them to that end. With Byron I can go singing along the Mediterranean and swim the Hellespont with none of the inconveniences of travel or dangers of the adventure, if so I choose to accept his lordship's standing invitation to participate at will in the enterprises he offers. Stevenson takes me with him on a joyous adventure with a donkey, or if I prefer conducts me through a Child's Garden of Verses, to the everlasting rejuvenation of my own aging spirit.

If I would sit upon the side lines of history, watching great events, observing epoch-making men at work at the very zenith of their fame, I can do it in a rocking-chair or swinging in a hammock, if I have books. I can participate in the fiercest battles of all time, from the fall of Jericho to the surgings to and from Ypres or Verdun, and not a hair of my head be imperiled. With Victor Hugo I can stand with the Old Guard at Waterloo. With Tennyson I can shamble through the hell and welter of Balaklava, charging with the Light Brigade. Shakespeare will lead me to the walls of Agincourt, where I may listen to the clarion

tones of Harry of England summoning his men to the breach. A mere scrap of printed paper will carry me through shot and shell over the Bridge of Lodi with Napoleon, and with Gibbon as my guide Rome itself will rise and fall for me—and if in a whimsy mood I choose to read the opening chapters last, and the closing chapters first, the fall will precede the rise as if history were complacently willing to reverse herself to suit my pleasure.

Nor can any company exclude me if I have books. I can sit in with Ben Jonson at the Mermaid Tavern, and delight my soul with his witty discourse, and if he becomes discursive and bores me, it is my privilege to shut him off at will by the mere closing of a pasteboard cover. I may consume endless quantities of chops and brew of pleasing sort at the Cheshire Cheese with the author of *Rasselas,* or in the more modest company of Oliver Goldsmith. I can go with Monte Cristo to his cavern of riches, or with Aladdin summon the genii to do my bidding. I can sit alongside of Priscilla while John Alden makes love to her on behalf of his friend, without any uneasy sense of intrusion. I can introduce myself to Stanley as, in the heart of Africa, he utters his famous, "Dr. Livingstone, I believe?" and run no risk of rebuff. Sir Walter Scott will read his own journals to me if I ask him, and on top of his pillar I can stand with Simeon Stylites without danger of falling off, and privileged to come down whenever I choose. If my manners show signs of deterioration, having books, I can sit under Chesterfield while he delivers his fatherly injunctions as to the principles of deportment, or better still rub elbows with Colonel Newcome, who at my call never fails to answer, "Adsum!"[1]

Who would not give a decade of his life to have known Lincoln? Well—Lincoln is not dead. It is only his habitation, the frame of which he was the immortal content, that has passed away. The man himself still lives, and stands over there upon my shelf—as he will stand upon yours if you choose to have him there—in all the splendor of his human sympathy and

[1] *Adsum:* I am here.

kingly character, his friend John Hay posted at the door ready to usher me into his presence. So, too, Emerson stands there, calling me constantly to a searching of the souls of the two of us, his and mine, I to find more of that which lies in mine by that which he reveals in his own as he talks to me of character and manners and the Oversoul, and of love and friendship. The gentle Elia walks with me, and talks to me. Thackeray and Dickens awaken me. Dante, Herrick, Shakespeare, Rossetti and Wordsworth sing to me. Cervantes and Swift and Addison and Steele and Montaigne are never too busy to pause awhile to chat with me, and to ease the asperities of life with their gentle flashes of goodly humor. And why?

Merely to repay me for the paltry gift of hospitality. Merely because in the four square walls of a little room I have given them lodgment. I can in very truth sing with Proctor:

> All round my room my silent servants wait,
> My friends in every season, bright and dim.
> Angels and Seraphim
> Come down and murmur to me, sweet and low,
> And spirits of the skies all come and go
> Early and late.

It is a rich reward for so slight a service!

CLASS ACTIVITIES

Problems for Class Work

1. Make on the board composite lists, using the individual data from the three columns formed during your reading of "My Silent Servants." If class time is lacking, delegate this duty to a committee.

1. Known. 2. Names Familiar. 3. Curiosity Aroused.

If each tally means a vote, you can easily have a reading survey of your group. Shakespeare would doubtless have a unanimous vote in column 1. Rossetti might have a unanimous vote in column 3, unless perchance your class has somewhere in school life come upon his poem "The Blessed Damozel."

2. It would be quite possible to take a survey of class reading range, somewhat on the same basis, of (1) all American authors of prominence, (2) all English authors of prominence. A class committee could prepare the lists, and conduct the survey, tabulating results. You may be sure that the principal of your school would be delighted to have the results of such a survey, neatly tabulated, placed in his hands.

Topics and Projects

1. Is "My Silent Servants" an appropriate title?
2. A book that was a "pill."
3. The meaning of "immortal" as applied to books.
4. Could you answer "Adsum" (I am here) for many of the books named by Bangs? Which ones?
5. How does the ability to answer "Adsum" to a great book bear upon the theme of Chapter V?
6. Discuss what you like about the books of Mark Twain.
7. "What one laughs at" as a mark of his character.
8. The most "valuable" book in your library.
9. Choose for your home reading one book mentioned by Bangs.
10. Write a paragraph in style like the paragraphs on pages 309-311, giving references to books you have read.
11. Is the statement of Charles Lamb on page 307 in keeping with the major thesis of USING THE MIND?
12. Why is the adjective "sleepless" appropriately applied to Dumas?

SECTION IV

FIRST STEPS IN ANALYSIS OF A BOOK[1]

EDWIN L. SHUMAN

Reading Suggestions

1. Mr. Shuman speaks of three major tests, *Form, Content,* and *Spirit,* as the criteria of the value of a book of literature, with suitable subordinate divisions of each major test. You have an opportunity to fix in mind the most important elements of literary criticism, to become possessed of an instrument by which you can measure anything you read.

2. Reading directions:

   (*a*) Read the article slowly.

   (*b*) Read it a second time more rapidly, but dwelling on the most important parts.

   (*c*) Restate the formulas on page 317 in your own words.

   (*d*) Learn these by heart as the class finally rewords them on the board, after discussion.

You can afford to spend two class periods in this process and one additional study period.

Most books, like most people, are partly good and partly not so good as they might be; our estimate of them must depend upon the preponderance of the one quality or the other. In order to know the good art from the bad, we must take a book to pieces and look at its component parts and qualities, testing these by certain ideals that serve the intelligent critic as standards of judgment.

All criticism involves comparison. The man in the street uses

[1]From Edwin L. Shuman's *How to Judge a Book,* Chapter II. Reprinted by special permission of, and by special arrangement with, Houghton Mifflin Company.

it—in a vague and useless form—when he asserts that Napoleon was a greater man than Shakespeare, or that *Vanity Fair* is a finer book than Boswell's *Life of Johnson.* He is comparing things that are widely different; he might as well say that a sunset is more beautiful than a cathedral. This hazy inaccuracy of thought is the vital defect in the average untrained person's criticism, making it to be more often worthless than otherwise. We must get hold of more analytical and definite methods. Let us see what elements go to the making of literature of any kind, and learn to measure these separately as well as in combination.

Strictly speaking, literature is limited to those writings that have beauty of some kind in them—that aim at artistic symmetry—that give esthetic pleasure or stir the nobler emotions of the reader. This definition includes only poetry and artistic prose, such as good fiction, dramas, essays, printed orations, and those works of biography, history, travel, etc., that can show any graces of style.

Literature draws its materials from life and seeks to represent life, but the great author does his work by means of selection and illusion, not by wholesale photography. He picks out certain significant phases, characters, traits, emotions, events, or truths, from life, breathes on them with the breath of creative imagination, and arranges them in a little world of their own, every part of which has artistic relations with every other part. This little world, when it comes to us in the form of a book, must create in us an illusion of life seen with our own eyes, and it must be judged—under its own laws—by its degree of beauty and significance.

Behind every literary product lies an idea, a concept, which the author has tried to put into visible form. Under the spell of his words, the reader should feel and see this concept as clearly as he sees, framed in his own window, the outline of a cottage across the street. So it is fair to begin by asking: What was the author's idea? What has he tried to do? For instance, what has Daniel Defoe tried to do in *Robinson Crusoe?* His

idea was to depict the adventures and emotions of a likable man cast alone on a tropical island, and to do it so plausibly and vividly that the reader shall be fascinated by their human interest.

Treading close upon the heels of the first question come three others: What degree of success has the author had in putting his idea into artistic form? Was his little world worth creating? How does the book rank with others of its kind? The answers to these queries are true literary criticism.

One of the first steps toward analysis is to learn to distinguish between the author's materials and his manner of presenting them—that is, between content and form. The author's concept may be compared to a fine silk gown that exists, as yet, only in the imagination of the modiste. The theme or matter of the book corresponds to the bolt of goods out of which the garment is cut. The portion of the original piece of silk retained in the finished gown corresponds to the "content" of the book. The author's grace of construction and of style may be likened to the beauty of the dress-pattern and the artistic workmanship of the seamstress. If the finished garment, viewed as a whole, has perfect-fitting grace of line and harmony of color and ornament, it possesses the vital artistic quality of unity.

Thus the beauty of a book or a gown may lie partly in the original materials, partly in the way the portions are arranged and put together, and partly in the trimming or other ornamentation that may be added in the process of creation. In so far as these added graces of workmanship can be distinguished from the "content," they constitute "style."

But style in literature is merged in a deeper quality called spirit—the author's attitude toward life, toward everything he touches. Sometimes the ordinary reader feels the lovability of a fine spirit in spite of defects of form, when the learned critics, whose rules it has eluded, cannot understand what has won the popular heart. It is this element in Dickens's works that helps to make them great in spite of frequent artistic defects.

Matter usually is more important than manner, the thing said than the way of saying it; but both are of vital value, and in poetry and some of the lighter forms of prose the form may count for more than the content. You read Poe's "The Raven," not for the wisdom it conveys, but for the music of its lines, or the mood it creates. You read Holmes's *Autocrat of the Breakfast Table,* not for its thought so much as for its rippling humor and whimsical fancies. And you feel, do you not, that the spirit of the one is vastly different from that of the other?

In order to tell why we approve or disapprove of a book, we must lay hold of certain ideals of form, content, and spirit, which have become established principles of literary art. These principles take on tangible form in the laws of grammar, rhetoric, logic, construction, esthetics, and truth in some of its larger aspects. Let us see if we can get at some of these underlying principles.

When you have got fairly into or through a book, pause and see how it answers the test of these three questions:

(1) Is its *matter* essentially true, well chosen, worth while?

(2) Is its *form* pleasing and in conformity with the laws of literary art?

(3) Is its *spirit* sincere, attractive, touched with any fine feelings?

These compound questions may be subdivided into others that are more technical and definite, such as these:

As to Content

(1) Is the matter chosen by the author worth presenting in any form?

(2) Does it interest you? Will it interest those for whom the book was intended?

(3) Has it been sifted and condensed, so as to exclude all that is irrelevant and therefore dull?

(4) Is it in any way original, so that it gives a fresh fillip to your thinking?

(5) If the book is a novel, do the characters represent human nature truly? Does the psychology of their acts ring true? Is there any new light on the workings of the human mind and heart?

(6) Does the plot show unusual powers of invention? Is the action probable? Does the story hold you?

(7) Has the author creative imagination? Does he conjure up living, unforgettable persons and pictures before the eye? Does he produce a sense of reality, of life, or complex life?

As to Form

(1) Has the writing a live man in it? Is it illumined by fancy, by freshness of imagery, by wit, humor, piquancy of phrase? (Style.)

(2) Are the materials presented in artistic order and sequence, according to the laws of beauty? (Esthetics.)

(3) Is the language correct? Are the sentences and parts of speech all right? (Grammar.)

(4) Is the diction graceful, clear, forceful, free of empty splurge? (Rhetoric.)

(5) Is the argument valid and logical? Is there an adequate cause for every effect? (Logic.)

(6) If it is poetry, are the laws of versification observed? (Prosody.)

(7) Whether prose or verse, does it sound well when read aloud? (Verbal harmony.)

(8) If it is fiction, are the events and ideals presented with proper narrative art, so as to keep you always interested in what is coming next, and producing in the end an impression of unity? (Construction.)

As to Spirit

(1) Is the author putting his heart into his work, or merely maintaining a pose?

(2) If sincere, does he show temperance, justice, and self-restraint in his appeal to your emotions?

(3) If the book stirs you, does it do so by picturing life truly, or by sensational and melodramatic exaggerations?

(4) Is it suffused by a glow of sentiment that makes you feel more kindly toward the people around you in real life?

(5) Does the book reveal a magnetic or a repellant personality, a broad or bigoted philosophy, a religion of hope or despair, an attitude of selfishness or of sympathy?

(6) Does the ultimate message of the book conform with the essential moral laws? Is its inmost spirit one of good-will to men?

(7) Does the work leave a sense of completeness and satisfaction after you have finished it?

These are some of the fundamental questions of all literary criticism, and any book may be tested by a majority of them. In so far as it measures up to the ideals thus indicated, it is true literature.

Notice that the questions relating to form and content deal mainly with qualities in the book itself, looked at outside of ourselves; while those relating to spirit deal with the more elusive qualities, which we have to judge by their emotional effects on our inmost selves. The external or objective data, when we can get at them, are the more stable; but the subjective, when caught on the sensitive retina of a cultured soul, are the deeper and more searching. All three sets of questions are worth studying carefully, so that they may be applied almost instinctively to every book you read.

Let us see, for instance, how George Eliot's *Romola* stands up under such an inquisition. Is the matter all worth presenting? Yes, there is nothing trivial in *Romola*. But is it all interesting to the average intelligent novel-reader? No; it is somewhat overloaded with philosophical and historical matter that belongs to an antiquarian treatise rather than to a novel. But even this is original—in the sense that it has been dug out of "source-books." How about the fitness of all the materials for producing an impression of unity? Well, there is no objection on that score—yet, wait a moment! I object to the highly romantic wanderings of Romola at the end. They are interesting, but not

in harmony with the realistic spirit of the main tragedy. The imagination is vivid; the characters are alive, full of human nature, well drawn, even memorable; the action is interesting and full of dignity and meaning. Yes, the book holds me in spite of its dull pages.

The questions as to grammar, rhetoric, logic, and the rest leave *Romola* almost unscratched. The sequence of cause and effect is perfect. The psychology of the story is almost flawless, while the working of the moral law, as usual in George Eliot, is absolute. On the score of esthetics, the only charge we bring is a certain heaviness of manner, akin to that of the materials. There is some play of fancy, however, some humor, not a little piquancy of phrase, a great deal of sound thought, often expressed in happy epigrams.

Is the spirit of *Romola* sincere? Absolutely. Throughout the book one can imagine the author saying: "Here I am not merely amusing myself; here, honestly and heartily admitted, you may find the things that life has taught me." The emotional appeal is self-restrained and genuine. The author's view of life is that of one who believes that the wages of sin is death, yet she believes equally that virtue has its sure reward. Her view of things is tonic, not cynical or gloomy. One feels behind the book a magnetic, broad-minded, deeply conscientious personality. It leaves the sense of completeness and satisfaction, that testifies to a book's unity and soundness of spirit.

On the whole, then, *Romola* is a great novel—one which, in spite of its faults, one wouldn't mind being condemned to read again.

How many of the popular novels of the hour will stand the same test? Try it on the latest one you have read.

When a person of uncultured taste walks through a picture gallery, it is the gayest-colored canvas that first attracts him—unless, indeed, he be like two boys of my acquaintance, who were found racing at breakneck speed through the room of choicest paintings at the World's Columbian Exposition. When asked

the reason for their haste, they explained: "There's nothin' here but pictures; we're goin' to Hagenbeck's circus." When the untrained reader enters the enchanted land of letters, his natural taste—or lack of it—leads him, as it does the red Indian, straight to the more garish colors. He passes by the finely wrought novel of character to waste his time upon some crude and bloody melodrama. Or, to change the pronoun, she prefers some mawkish tale of sentimentality, in which the emotional coloring is as false and impossible as if it had been written on Old Sleuth's recipe for action: "At least one thrill to every thousand words."

This poor stuff may be the best that a crude taste can enjoy, but its quality as art is shown plainly enough by the fact that it never lives long; it has no lasting attraction, even for those who are temporarily deceived by it. Jane Austen's quiet novels, with never a loud word or a heightened heart-beat, live a century, while a thousand overcolored romances lapse into oblivion before our eyes. Beware of the author who habitually "frightens the evening sky into violent photolithographic tints." If a woman dresses in crude and overemphasized colors you say she is "loud," and you prefer the one whose gowns are of neutral and harmonious tints, revealing her refinement and elegance. Much the same test applies to novels.

Here is one of Mrs. Humphrey Ward's, say *The Marriage of William Ashe*. It is rather gray in its tones, a trifle cold, burdened somewhat with intellectual freight, but its art is chaste, its characters alive, its psychology sound, its action true and often beautiful. You do not like it? And you do like this story by Marie Corelli, in which an impossible figure, meant to represent Christ come back to earth, rants in an impossible style over the defects of the modern church? Well, your preference is quite natural. The novel is one of the most crudely colored that ever got among the "best sellers." Look at it again. Though it may be sincere in spirit, the style is inflated, the action melodramatic, the emotion frenzied, and the characters do not talk or act like real people. If Miss Corelli's novels did one-half the

violence to moral laws that they do to the laws of art, her readers would turn away in horror; which is only another way of saying that in England and America the average person's moral standards are higher than his literary standards.

Evil and good are as inseparable in life as a man and his shadow, and both must play their part in literature. There can be no picture and no story without some shadow in it, but we are justified in disliking a story in which all the characters are unpleasant, and in refusing to read one in which the whole world is painted black. This is simply another form of overcoloring, though good artists at times are guilty of it. A man like Ian Maclaren will dip into Scotch life and bring forth the gentle humor and pathos of *Beside the Bonnie Brier Bush,* with a noble doctor of the old school as a typical character; while Maxim Gorky will dip into Russian life and produce a hideous nightmare such as *The Spy,* portraying a human welter of cowardly, drunken, suspicious, wholly contemptible characters, an inferno of skulking deceivers and silly deceived, running to and fro in a dim, mephitic gloom of besotted ignorance. There are those who will tell you that Gorky's *The Spy* is greater than *Beside the Bonnie Brier Bush.* Do not believe it. There must be beauty of content as well as of form.

Literary beauty may take on an infinite variety of forms, ranging from the stately grandeur of great imaginative creations, such as Dante's *Divine Comedy* or Shakespeare's *King Lear,* to the little flowers of fancy with which Stevenson and Howells decorate their essays. In our day the imaginative creation of character—the portrayal of complex human nature in its relations with a complex society—so long as the humanity portrayed is not wholly base and contemptible, is the author's greatest achievement. To couple this creative power with the depicting of a dramatic scene that thrills in the memory ever afterward—this, too, is a doing of a genius. Pure love well portrayed also is eternally beautiful, fulfilling Charles Dudley Warner's dictum that "literature must have in it something of the endur-

ing and the universal." Wit, humor, and pathos always are legal tender, as are self-sacrifice, courage, the attainment of happiness through trial nobly endured. But it is only when such beautiful materials, thrown into relief against some of the darker aspects of life, are fused by a strong creative imagination into living characters and scenes, that we have the highest literary art.

CLASS ACTIVITIES

Problems

1. Test your reading of Mr. Shuman's essay by making a definition of your own for the term "literature," without turning back, if possible. If you cannot, read the first four paragraphs carefully, close your book and write a definition of "literature."

2. A class exercise applying the standards to the one novel read last by the entire class. You may have to go back to George Eliot's *Silas Marner* to find a book read by all. Reduce Shuman's standards to three under *Form, Content, Spirit,* respectively, making nine tests, all told, that you apply to the novel chosen.

3. Is Shuman's distinction between moral standards and art standards well taken?

4. Somebody said of himself that he liked religion and flowers but he disliked theology and botany. How does Shuman's discussion illustrate the point?

5. As Shuman suggests, deliberately apply all the tests named on pages 317-319 to a recent popular best seller. Write out your judgments.

SECTION V

MEDITATION AND IMAGINATION[1]

Hamilton Wright Mabie

Reading Suggestions

1. This selection by Mr. Mabie might well have been included in Chapter V. Turn back to that chapter; look through Section I, pages 193 to 200. Have the central theme of that chapter clearly in mind before you read the present selection. Be ready to tell how it supports and develops the central theme of Chapter V.

2. Pencil in hand, check very lightly margins opposite the parts of the text which indicate Mr. Mabie's idea of culture as contrasted with mere learning. At the end of a second reading, test yourself by writing one paragraph, without notes and with book closed, on the topic: "The Nature of Reading for Culture."

There is a book in the British Museum which would have, for many people, a greater value than any other single volume in the world; it is a copy of Florio's translation of Montaigne, and it bears Shakespeare's autograph on a flyleaf. There are other books which must have had the same ownership; among them were Holinshed's *Chronicles* and North's translation of Plutarch.

Shakespeare would have laid posterity under still greater obligations, if that were possible, if in some autobiographic mood he had told us how he read these books; for never, surely, were books read with greater insight and with more complete absorp-

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tion. Indeed, the fruits of this reading were so rich and ripe that the books from which their juices came seem but dry husks and shells in comparison. The reader drained the writer dry of every particle of suggestiveness, and then re-created the material in new and imperishable forms. The process of reproduction was individual, and is not to be shared by others; it was the expression of that rare and inexplicable personal energy which we call genius; but the process of absorption may be shared by all who care to submit to the discipline which it involves.

It is clear that Shakespeare read in such a way as to possess what he read; he not only remembered it, but he incorporated it into himself. No other kind of reading could have brought the East out of its grave, with its rich and languorous atmosphere steeping the senses in the charm of Cleopatra, or recalled the massive and powerfully organized life of Rome about the person of the great Caesar. Shakespeare read his books with such insight and imagination that they became part of himself; and so far as this process is concerned, the reader of today can follow in his steps.

The majority of people have not learned this secret; they read for information or for refreshment; they do not read for enrichment. Feeding one's nature at all the sources of life, browsing at will on all the uplands of knowledge and thought, do not bear the fruit of acquirement only; they put us into personal possession of the vitality, the truth, and the beauty about us. A man may know the plays of Shakespeare accurately as regards their order, form, construction, and language, and yet remain almost without knowledge of what Shakespeare was at heart, and of his significance in the history of the human soul. It is this deeper knowledge, however, which is essential for culture; for culture is such an appropriation of knowledge that it becomes a part of ourselves. It is no longer something added by the memory; it is something possessed by the soul. A pedant is formed by his memory; a man of culture is formed by the habit of meditation, and by the constant use of the imagination.

An alert and curious man goes through the world taking note of all that passes under his eyes, and collects a great mass of information, which is in no sense incorporated into his own mind, but remains a definite territory outside his own nature, which he has annexed. A man of receptive mind and heart, on the other hand, meditating on what he sees, and getting at its meaning by the divining-rod of the imagination, discovers the law behind the phenomena, the truth behind the fact, the vital force which flows through all things, and gives them their significance. The first man gains information; the second gains culture. The pedant pours out an endless succession of facts with a monotonous uniformity of emphasis, and exhausts while he instructs; the man of culture gives us a few facts, luminous in their relation to one another, and freshens and stimulates by bringing us into contact with ideas and with life.

To get at the heart of books we must live with and in them; we must make them our constant companions; we must turn them over and over in thought, slowly penetrating their innermost meaning; and when we possess their thought we must work it into our own thought. The reading of a real book ought to be an event in one's history; it ought to enlarge the vision, deepen the base of conviction, and add to the reader whatever knowledge, insight, beauty, and power it contains.

A visitor was shown into Mr. Lowell's room one evening not many years ago, and found him barricaded behind rows of open books; they covered the table and were spread out on the floor in an irregular but magic circle. "Still studying Dante?" said the intruder into the workshop of as true a man of culture as we have known on this continent. "Yes," was the prompt reply; "always studying Dante."

A man's intellectual character is determined by what he habitually thinks about. The mind cannot always be consciously directed to definite ends; it has hours of relaxation. There are many hours in the life of the most strenuous and arduous man when the mind goes its own way and thinks its own thoughts.

These times of relaxation, when the mind follows its own bent, are perhaps the most fruitful and significant periods in a rich and noble intellectual life. The real nature, the deeper instincts of the man, come out in these moments, as essential refinement and genuine breeding are revealed when the man is off guard and acts and speaks instinctively. It is possible to be mentally active and intellectually poor and sterile; to drive the mind along certain courses of work, but to have no deep life of thought behind these calculated activities. The life of the mind is rich and fruitful only when thought, released from specific tasks, flies at once to great themes as its natural objects of interest and love, its natural sources of refreshment and strength. Under all our definite activities there runs a stream of meditation; and the character of that meditation determines our wealth or our poverty, our productiveness or our sterility.

This instinctive action of the mind, although largely unconscious, is by no means irresponsible; it may be directed and controlled; it may be turned, by such control, into a Pactolian stream[1], enriching us while we rest and ennobling us while we play. For the mind may be trained to meditate on great themes instead of giving itself up to idle reverie; when it is released from work it may concern itself with the highest things as readily as with those which are insignificant and paltry. Whoever can command his meditations in the streets, along the country roads, on the train, in the hours of relaxation, can enrich himself for all time without effort or fatigue; for it is as easy and restful to think about great things as about small ones.

A certain lover of books made this discovery years ago, and has turned it to account with great profit to himself. He thought he discovered in the faces of certain great writers a meditative quality full of repose and suggestive of a constant companionship with the highest themes. It seemed to him that these thinkers, who had done so much to liberate his own thought, must have

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[1]*Pactolian stream:* Refers to the Pactolus, a river in ancient Lydia, famous for its golden sands.

dwelt habitually with noble ideas; that in every leisure hour they must have turned instinctively to those deep things which concern most closely the life of men.

The vast majority of men are so absorbed in dealing with material that they appear to be untouched by the general questions of life; but these general questions are the habitual concern of the men who think. In such men the mind, released from specific tasks, turns at once and by preference to these great themes, and by quiet meditation feeds and enriches the very soul of the thinker. And the quality of this meditation determines whether the nature shall be productive or sterile; whether a man shall be merely a logician, or a creative force in the world. Following this hint, this lover of books persistently trained himself, in his leisure hours, to think over the books he was reading; to meditate on particular passages, and, in the case of dramas and novels, to look at characters from different sides. It was not easy at first, and it was distinctively work; but it became instinctive at last, and consequently it became play. The stream of thought, once set in a given direction, flows now of its own gravitation; and reverie, instead of being idle and meaningless, has become rich and fruitful. If one subjects *The Tempest,* for instance, to this process, he soon learns it by heart; first he feels its beauty; then he gets whatever definite information there is in it; as he reflects, its constructive unity grows clear to him, and he sees its quality as a piece of art; and finally its rich and noble disclosure of the poet's conception of life grows upon him until the play belongs to him almost as much as it belonged to Shakespeare. This process of meditation habitually brought to bear on one's reading lays bare the very heart of the book in hand, and puts one in complete possession of it.

This process of meditation, if it is to bear its richest fruit, must be accompanied by a constant play of the imagination, than which there is no faculty more readily cultivated or more constantly neglected. Some readers see only a flat surface as they read; others find the book a door into a real world, and forget

that they are dealing with a book. The real readers get beyond the book, into the life which it describes. They see the island in *The Tempest;* they hear the tumult of the storm; they mingle with the little company who, on that magical stage, reflect all the passions of men and are brought under the spell of the highest powers of man's spirit.

It is a significant fact that in the lives of men of genius the reading of two or three books has often provoked an immediate and striking expansion of thought and power. Samuel Johnson, a clumsy boy in his father's bookshop, searching for apples, came upon Petrarch, and was destined henceforth to be a man of letters. John Keats, apprenticed to an apothecary, read Spenser's "Epithalamium" one golden afternoon in company with his friend Cowden Clark, and from that hour was a poet by the grace of God. In both cases the readers read with the imagination, or their own natures would not have kindled with so sudden a flash. The torch is passed on to those only whose hands are outstretched to receive it.

To read with the imagination, one must take time to let the figures perform in his own mind; he must see them with great distinctness and realize them with great definiteness. Benjamin Franklin tells us, in that *Autobiography* which was one of our earliest, and remains one of our most genuine pieces of writing, that when he discovered his need of a larger vocabulary, he took some of the tales which he found in an odd volume of the *Spectator* and turned them into verse; "and after a time, when I had pretty well forgotten the prose, turned them back again. I also sometimes jumbled my collections of hints into confusion, and after some weeks endeavored to reduce them into the best order before I began to form the full sentences and complete the paper." Such a patient recasting of material for the ends of verbal exactness and accuracy suggests ways in which the imagination may deal with characters and scenes in order to stimulate and foster its own activity. It is well to recall at frequent intervals the story we read in some dramatist, poet, or novelist, in

order that the imagination may set it before us again in all its rich vitality. It is well also as we read to insist on seeing the picture as well as the words. It is as easy to see the bloodless duke before the portrait of "My Last Duchess," in Browning's little masterpiece, to take in all the accessories and carry away with us a vivid and lasting impression, as it is to follow with the eye the succession of words. In this way we possess the poem, and make it serve the ends of culture.

CLASS ACTIVITIES

Problems and Projects

1. Read your paragraphs on "The Nature of Reading for Culture"; select the three best by class vote; write them on the board; discuss them; modify as you see fit; and copy at least one besides your own in your notebooks.

2. How does Mr. Mabie's discussion support the central theme of Chapter IV?

3. Reading for information; reading for refreshment; reading for enrichment. Plan an oral discussion bringing out the distinctions indicated, supporting each by citing at least one book. Recall what Shuman says about comparison and contrast.

4. A great writer does not draw his materials from life by "wholesale photography"; he "does his work by selection and illusion." Apply this principle to any poem well known to your group, like "Incident of the French Camp," or "The Revenge." In contrast, a textbook writer needs to proceed largely by "wholesale photography." Recall a chapter from a book on physics or botany or biology.

5. How does Mabie's story of Lowell's "always studying Dante" illustrate the relationship between study and culture?

6. Oliver Wendell Holmes says there are two types of individuals, the $2+2=4$ type, and the $a+b=c$ type. To which class do you belong? How is this question pertinent to the meaning of this chapter?

Reading Projects

1. "Some nutriment is demanded for our souls besides the nutriment of facts. An interesting investigation might be to choose an extract from a favorite poem, story, novel, or drama illustrative of characteristic facts; then point out, from the reading of the selected piece, two or three types of "nutriment" which are not facts. In all probability the student who works on this project will find that the "nutriment not facts" consists of his own constructive contributions, the nature of which we considered in Chapter V. Attempt this study, the goal to be a presentation of your results before the class.

2. There are two contrasted types of books, those which yield primarily the "nutriment of facts," and those which yield mainly "nutriment for souls." May not some books do both? See if you can name from your own reading one or more books of each type. Carefully find and formulate your data in this problem.

3. Mr. Bangs gives several suggestions for reading projects (pages 307 ff.). Your teacher will indicate which are most appropriate for exploration in any library.

4. Read George Eliot's *Romola* to see if you agree with Shuman in the tests he applies to that book (page 319).

5. Try, as Shuman suggests, the tests as finally revised by your class on one of the "latest" novels.

6. "On Humor in Literature," by C. S. Evans, *The Bookman,* Vol. 51, page 648, traces the causes of laughter to the elements of fear, confusion, and curiosity, and names many books in which the element of humor can be traced. This is a good basis for group study. Read the article and propose plans to the class.

7. Consider the difference between "poetry of mere talent," "middling poetry," and the "poetry of genius." See John Burroughs, "What Makes a Poem," *The Bookman,* Vol. 52, page 102.

8. The reading experiences of Warren Harding, Howard Egbert, *The Bookman,* Vol. 52, page 128, "The Literary Side of the Presidential Candidates." Contrast with Woodrow Wilson's reading, *The Bookman,* Vol. 52, page 291.

9. A basis for a study of Carl Sandburg's poems. See "Carl Sandburg, Human Being," Walter Yust, *The Bookman,* Vol. 52, page 385. In an interview Sandburg tells how he writes his poems.

10. John Burroughs's reading habits. See H. Z. West, "John Burroughs," *The Bookman,* Vol. 49, page 389.

11. A satire on new poetry. See Carolyn Wells, "On First Reading New Poetry," *The Bookman,* Vol. 49, page 458; and Ellis P. Butler, "Getting Material," *The Bookman,* Vol. 49, page 581. How many qualities of new poetry does Miss Wells attempt to illustrate? In this connection, you may care to examine Marguerite Wilkinson's *New Voices.*

Questions for Discussion

1. "The idle rime has only the lilt of a few dancing words, or the sparkle of a few trifling fancies." Is there then no place for "idle rimes"? If so, when, where, what? Name one.

2. What line of work in your school do you consider the pivotal or positive study for yourself? May there be several in the curriculum for various students? Why?

3. Are "pictorial reviews" of current events popular with movie audiences in your community? How popular are they as compared with other parts of the program? Why?

4. You may know the term "a candy drunkard." Did you personally ever go through a period of "reading intensity" when you devoured books of any sort? What broke you of the bad habit? How would you help a younger brother or sister out of that state, which is perfectly natural for children from twelve to fifteen years of age?

5. Does a boy of fourteen or fifteen enjoy stories or plays like Booth Tarkington's *Penrod?* It has been said that the predicaments of that "hero" do not especially appeal to boys of his age. If this is true, explain why.

6. What outstanding books of "the concrete literature of fact" have you used in your present school year? What magazines of the day seem to be most exclusively devoted to such materials? Which least?

7. "Bovée tells us that 'Books are embalméd minds.'" (See Bangs, page 306.) Mr. Bangs disagrees. Who is right? Prepare your answer carefully.

8. Apply any one of Shuman's three sets of tests to a book of your choice. Prepare a written or oral discussion as your teacher directs.

9. In what ways do you think the "Home Reading," or "Outside

Reading" of English classes may best be managed to secure the highest enjoyment or "the least distress" for the average English class? Let your discussion turn on choice of books, ways of assignments, methods of testing or checking.

10. Can you recall from any of the selections in this chapter support for Mrs. Browning's statement of good reading?

> When
> We gloriously forget ourselves, and plunge
> Soul-forward, headlong, into a book's profound,
> Impassioned for its beauty and salt of truth—
> 'Tis then we get the right good from a book.

Quote a passage.

11. What novel, not a schoolbook, may you choose as the standard "for your discriminating sense," as a yardstick by which to measure the value of current writing? What about the book made you choose it? Apply the standards of pages 317 ff.

12. Asked to name the ten greatest novels, Edward Everett Hale chose *Robinson Crusoe, Uncle Tom's Cabin, Jane Eyre, A Tale of Two Cities, The Arabian Nights, The Newcomes, Ivanhoe, Romola, Pride and Prejudice, The Three Guardsmen.* Are you not surprised that you may have read all but two or three? Why not finish the list? Still better; the question, "What are the ten greatest novels?" was addressed to about fifty distinguished men and women. Those chosen were *The Scarlet Letter, Les Miserables, Romola, Adam Bede, Ivanhoe, David Copperfield, Henry Esmond, Wilhelm Meister, Uncle Tom's Cabin, On the Heights.* Choose one you have not read for your home reading book.

13. Would Emerson's three rules of reading be appropriate for the average man or woman? "Never read a book that is not a year old. Never read any but famed books. Never read any but what you like."

14. Bacon said: "Some books are to be tasted, some to be swallowed, and some few to be chewed and digested; that is, some books are to be read only in parts; others to be read, but not curiously; and some few to be read wholly, and with diligence and attention." Is this in line with the discussions of the present chapter? With what author especially? With what part of his article? Give page reference and quotations. Several different portions of the chapter may serve admirably at this point. Use illustrations also from books you have read.

15. We are often urged not to read "such books as occupy the public mind." This advice would rigorously exclude "best sellers," popular novels, and the like. Admitting that the issue is debatable, many people think that every person of taste and ability should read some of the "best sellers" of his day. The caution is sound so far as it warns against excessive devotion to light fiction, and complete neglect of more virile reading. What seems to you the right position? Why?

16. Queries may be raised concerning even Ruskin's advice "Avoid generally magazine and review literature." Raise one such question; select data to support your judgment; carefully formulate a judgment; present it to the class, either orally or in writing as the teacher directs. Note that the word "generally" is significant in Ruskin's sentence.

Exercise: Book Reviews

1. The New York *Sun* published a review of a certain biography written by a distinguished man. After the usual heading giving the author's name, the publisher's name, the number of volumes, etc., the review was in these words: "This work weighs four pounds." What might you think of the value of the book from this review? What might you think of the competency of the reviewer? If your curiosity is aroused, read the article from which the anecdote is taken: W. G. Glasson, "Methods of Book Reviewing," *Library Journal,* Vol. 37, pages 135-6.

2. An interesting research problem might be developed for a group of your class on the basis of the article of Mr. Glasson cited above. Strong and weak characteristics of book reports are described in detail. Using the suggestions of the article as a basis, and supplementing the standards of good reviews by class discussion, arrive at a series of about ten items under the heading: What Constitutes a Good Book Review. Then, having the class divided into committees, with these tests study the book reviews in several different magazines. Each committee may present its findings in the class laboratory; ultimately your class may arrive, with concrete data, at a reliable conclusion about "Book Reviews in Several Current Magazines."

Topics for Oral and Written Work

1. A subject on which I try to "keep up." Why? How?
2. My idea of leisure occupation.
3. A book "of knowledge," contrasted with a book "of power."
4. A poet who looks *in,* not *at* an object.
5. Why I select my "specialty."
6. An article chosen from the daily press that advances coöperation, tolerance, fair dealing, neighborliness, or charity.
7. Lines of Shakespeare that make my imagination leap! For example:

(*a*) "Rosy Dawn stands tiptoe on the misty mountain top."
(*b*) "He was perfumed like a milliner."
(*c*) "Will all the perfumes of Arabia ne'er sweeten this little hand?"

8. "Significant traits" of an interesting character I met in a book. Name and discuss the traits of one of the characters in a book you have recently read.
9. "Matter," "style," and "spirit," as characteristics of ..... (name your book).
10. A "rare" book in our city library. An interview with the librarian about "rare" books.
11. Woodrow Wilson's reading for recreation. *The Bookman,* Vol. 52, page 291.
12. Sham reading: *The Bookman,* Vol. 51, page 426.
13. Report an experience in making one book go a long way.
14. Three books of adventure arranged in order of increasing excellence.
15. Three books of travel in order of increasing excellence.
16. When I don't want to read a "good" book.
17. Sophocles said he did not believe in finding truth by counting noses. Apply this to books.
18. McMurry says on page 30 that "reading for recreation is not study." Justify his statement.
19. A novel which meets the definition, "History without documents; nothing to prove it." Consult your history teacher to be sure you are right.
20. A versifier who is not a poet.
21. A poem which "sees into the human heart."

22. Bliss Perry said, "To stop with the analytic study of poetry is to count the rose's petals and forget to see the rose." Illustrate with a poem.

23. "Some people would rather analyze a thistle than smell a rose." Show that an intelligent person, dealing with different types of written matter, needs upon occasion, to be able to do both.

24. A list of my "easy-chair" readings of the past month; of the past year.

25. Some reading for practical purposes which I have recently done for one of my courses.

26. If I were asked how to select a *special reading interest* developed, or at least strengthened, by one of my school courses, I should select ..... What? Why? What have you read on the subject? Find one book on your special hobby.

27. If your class has not previously done so, plan a report around the class on "A subject in which I wish to go nearly to the bottom." Tell your interest, its origin and growth, and how you have so far fostered it by reading, and in other ways. Let this be associated with any aspect of your present or your future.

ADDITIONAL READING PROJECTS

1. "Books, An Extravaganza," Frank Crane, *The Independent,* Vol. 73, page 1295. Shows the very great importance of books.
2. "Of Queens' Gardens," John Ruskin, *Sesame and Lilies,* Chap. II. Every girl should read this selection.
3. "The Purpose of Reading," John Macy, *A Guide to Reading,* Chap. II. Discusses the reading of Lincoln, Grant, Napoleon, Franklin, and others, stressing thoroughness in reading.
4. "What to Read and the Abuse of Books," J. H. Penniman, *Books and How to Make the Most of Them,* Chap. IV. "Many people live in first-class houses and read third or fourth-class books."
5. "The Art of Reading," J. H. Penniman, *Books and How to Make the Most of Them,* Chap. V. Different ways of reading books; stresses the value of concentration.
6. "The Cultivation of Taste," C. S. Richardson, *The Choice of Books,* page 91. "Do not pretend to like what you do not like."
7. "The Choice of Books," Frederic Harrison, *The Choice of Books,* Chap. I. Cautions against reading too many and unwisely selected books.

8. "A Familiar Talk about Books," J. N. Larned, *Books, Culture, and Character,* Chap I. A survey of young people's reading interests and values.
9. "The Test of Quality in Books," J. N. Larned, *Books, Culture, and Character,* Chap. II. "Does the book leave wholesome and fine feeling in the mind of one who reads it?"
10. "A Plea for More Reading," Grant M. Overton, *The Bookman,* Vol. 52, page 97. Reading of books compared with motion pictures.
11. "High Points in a Reader's Path," Walter P. Eaton, *The Bookman,* Vol. 49, page 641. Romances of reading; an article full of anecdotes; good opportunity to suggest suitable reading choices.
12. "On Humor in Literature," C. S. Evans, *The Bookman,* Vol. 51, page 648. What makes us smile or laugh when reading.
13. "W. L. George on American Literature," Donald Lowden, *The Bookman,* Vol. 52, page 193. "The main point about American literature is that it is pioneer literature." Easy and interesting research suggested.
14. "History as Literature," Constance L. Skinner, *The Bookman,* Vol. 49, page 750. Complains that history is not interpreted. Books since the war that are interpreting Americanism. Project on "Americanism in recent literature" suggested.
15. "The Problem of Modern Poetry," Ludwig Lewisohn, *The Bookman,* Vol. 48, page 550. "The Case of Modern Poetry vs. Professor Lewisohn," Amy Lowell, *The Bookman,* Vol. 48, page 558. An interesting debate on the strength and weakness of modern poetry.
16. "Time and Place," H. W. Mabie, *Books and Culture,* Chap. II. Saving odds and ends of time for cultural reading.
17. "The Reading of Fiction," John Macy, *A Guide to Reading,* Chap. III, Chap. IV. What is worth while and how to read it.
18. "Why We Should Read Books," Corra Harris, *The Independent,* Vol. 85, page 117. "Books are not better comrades than people, but they are often safer and kinder, always less expensive, and less exacting." Contains a curious argument in behalf of "bad" books.
19. "How to Read Periodicals," C. F. Richardson, *The Choice of Books,* page 136. Explains the selective process in reading newspapers.
20. "Why a Classic Is a Classic," Arnold Bennett, *Literary Taste: How to Form It,* Chap. III. How the fame of great authors is determined.
21. "On Books and Reading," Finley P. Dunne ("Mr. Dooley"), *The Century Magazine,* Vol. 64, page 84. If you like "Mr. Dooley," you will enjoy this conversation about reading.
22. "The Hundred Worst Books," S. M. Crothers, *Atlantic Monthly,* Vol. 103, page 577. "The most salient characteristics of poor

writing." The essayist points out three or four. The discussion has a bearing upon school work.

23. "The Pleasures of Rereading," The Spectator, *Living Age,* 259, Vol. 41, page 185. What does this writer consider the tests of books we reread?
24. "What's the Use?" J. B. Kerfoot, *How to Read,* Chap. IV. Explains that all reading has one of two purposes: we read "to get away from ourselves" or "to find ourselves."
25. "The World outside Us and the World within," J. B. Kerfoot, *How to Read,* Chap. VI. How the true reader reconstructs for himself the experiences about which he is reading. "We enter the lists as Ivanhoe."
26. "Literature Can Keep before You the Vision of the Ideal," C. Alphonso Smith, *What Can Literature Do for Me?* Chap. II. Literature sets forth the attainments of the race in subduing external nature, and the ideals of the inner world of human nature.
27. "Literature Can Give You a Better Knowledge of Human Nature," C. Alphonso Smith, *What Can Literature Do for Me?* Chap. III. A knowledge of human nature can be learned from every kind of literature, especially through the great characters portrayed. Most high-school students are acquainted with the list of characters named by the author.
28. "General Standards," Edwin L. Shuman, *How to Judge a Book,* Chap. I. Sensible standards of truth, feeling, and quality by which to judge a book.
29. "Character Drawing," Edwin L. Shuman, *How to Judge a Book,* Chap. IV. The standards by which to judge well-drawn characters.
30. "The New Definition of the Cultured Man," Charles W. Eliot, in *The Freshman and His College,* page 79, F. F. Lockwood, Editor. Character, command of the mother tongue, acquaintance with human progress, and imagination, as the arts of culture.
31. "On the Choice of Books," James Baldwin, *The Book Lover,* Chap. I. "The choice of books, like the choice of friends, is a serious duty"; how to fulfill that duty.
32. "The Study of Literature," John Macy, *A Guide to Reading,* Chap. XII. The difference between *reading* literature and *studying* literature.
33. "Benjamin Franklin, Bookman," Asa D. Dickinson, *The Bookman,* Vol. 53, page 197. Interesting insight into early American books and book-making.
34. "A Test of Taste," R. D. Townsend, *The Outlook,* Vol. 129, page 617. How living authors score with readers of *The Outlook.*

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